DOCUMENT RESUME

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ABSTRACT

Compiled are abstracts and indexes to selected print and non-print materials related to wastewater treatment and water quality education and instruction, as well as materials related to pesticides, hazardous wastes, and public participation. Sources of abstracted/indexed materials include all levels of government, private concerns, and educational institutions. Title, author(s), publication date, cross-references, descriptors, and availability are provided for each entry. Also included are procedures to illustrate how instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements of their programs. This publication supplements and does not replace "Water Quality Instructional Resources Information System (IRIS): A Compilation of Abstracts to Water Quality and Water Resources" or IRIS Supplements 1-21. (JN)

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ED260915

Prepared by

Environmental Quality Instructional Resources Center
SMEAC Information Reference Center
The Ohio State University
1200 Chambers Road, Room 310
Columbus, OH 43212

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

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WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS)

A Compilation of Abstracts to Water Quality and Water Resources Materials

Supplement 22 (1985)

SE 045 955

July, 1985

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Robert W. Howe

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

TABLE OF CONTENTS

Topic		Page
Preface		
I.	General Information about Materials in IRIS	1
	A. What Types of Materials Are Included in IRIS	1
	B. How Are Materials Entered in IRIS	1
	C. How Can a User Locate Materials in IRIS	1
	1. All Materials Placed in IRIS (Water) Collection	1
	2. Materials Placed in the Educational Resources Information System (ERIC)	2
II.	How to Use the Compilation	4
	A. Description of Information in Resumes	4
	B. How to Locate Desired Materials	6
	1. Subject Index	6
	2. Author Index	7
III.	Correcting an Existing IRIS Record	7
IV.	Requests to Receive Information about IRIS and the IRC Bulletin	8
V.	Requests for Assistance in Using IRIS	8
VI.	How to Locate Other Relevant Educational Materials	9
VII.	How to Order Materials	15
VIII.	Resume Section	17
IX.	Author Index	71
X.	Subject Index	77

Preface

This publication contains abstracts and indexes to selected materials related to wastewater treatment and water quality education and instruction. In addition, some materials related to pesticides, hazardous wastes, and public participation are included. Also included are procedures to illustrate how instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements in their programs.

Supplements to this publication will be issued periodically.

For further information about these materials contact:

Environmental Quality Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212

(614) 422-6717

I. General Information about Materials in IRIS.

A. What types of materials are included in IRIS?

The Environmental Quality Instructional Resources Center acquires, reviews, indexes, and announces both print (books, modules, units, etc.) and non-print (films, slides, video tapes, etc.) materials related to water quality and water resources education and instruction.

Materials selected must be available from some source for announcement. When materials are not readily available we attempt to make the materials available through some national information service for easier acquisition. In a few cases the Environmental Quality Instructional Resources Center is the source of the materials.

B. How are materials entered into IRIS?

We request that people assist us in locating materials for the system. If you have materials you believe to be useful to others, please send two copies if possible to the:

Environmental Quality (EQ) Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212

Materials are reviewed by the project staff. Availability of the materials is checked, and the materials are abstracted and indexed. The abstract describes the contents of the material. The index terms (descriptors) are concepts or terms used to describe the contents and the form of the document. (See the Subject Index for a listing of those that have been used.) The index terms are useful for locating materials manually, such as with this supplement, and also by computer.

When items are processed they are entered on the IRIS (water) computer tape. This tape is maintained by the EQ Instructional Resources Center at The Ohio State University and is used for producing tapes for other information systems, publications, and for computer searches conducted at The Ohio State University.

C. How can a user locate materials in IRIS?

1. All materials placed in IRIS (water) collection.

Materials entered into the IRIS (water) collection can be located in two ways: (1) by manual search of the 1983 compilation and supplements that follow and (2) by computer.

The compilation produced in 1983 includes the original IRIS (1979) and Supplements 1-15. It is available for $75.00.

Quarterly updates of the compilation are available by subscription on a yearly basis. Information regarding an annual subscription to IRIS (water) Quarterly Compilations can be obtained by writing to the EQ Instructional Resources Center. A subscription to the quarterly supplements for 1985 is $12.00 (within the U.S.). Price to Canada and Mexico is $14.00. Prices in other Countries is $18.00. Separate quarterly supplements are $5.00 each.

The compilation and the quarterly supplements can be scanned and the subject index can be used for manual searches.

Computer tapes of the IRIS (water) collection can also be searched. The IRIS tapes are available for searching at The Ohio State University and will again be available for computer searching at other sites in the future.

2. Materials placed in the Educational Resources Information System (ERIC)

A number of the materials processed for the IRIS (water) system are entered into the ERIC system and announced in Resources in Education (RIE). Resources in Education (RIE) is published monthly and is available from:

Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20402
(202) 783-3238

The current price is listed in the most recent issue of RIE. Check if a college or university library close to you has a copy. If they do not, contact the EQ Instructional Resources Center for assistance.

Many libraries subscribe to RIE. Materials announced in RIE can be searched manually each month by scanning RIE or by checking the index terms in the back of each issue. Materials announced in RIE can be searched by computer also. ERIC computer tapes may be purchased outright, but users can access them through Dialog, BRS, CompuServe and Systems Development Corporation (Orbit). For the address of search services in your state that can search these databases, contact the:

EQ Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212
(614) 422-6717

Most of the materials announced in RIE are available on microfiche (microfilm) at over 700 sites throughout the United States and the world. Users can view these materials on site at many locations to identify what they believe will be useful to them at no cost. Microfiche copies (or in most cases Xerox copies) can be ordered through the ERIC Document Reproduction Service. The address and order information is in the back of each issue of RIE. Xerox copies of many items related to water quality and resource education and training can also be ordered through the EQ Instructional Resources Center for $0.06 per page plus $1.00 per document.

For information about locations of ERIC microfiche sites in your state, contact the EQ Instructional Resources Center.

A number of journal articles processed for the IRIS (water) system are entered into the ERIC system and announced in Current Index to Journals in Education (CIJE).

Current Index to Journals in Education is published monthly and is available from:

ORYX Press
2214 North Central at Encanto
Phoenix, Arizona 85004
(602) 254-6156

Many libraries subscribe to CIJE. Materials announced in CIJE can be searched manually each month by scanning CIJE or by checking the index terms in the back of each issue. Materials announced in CIJE can be searched by computer also. Refer to the previous discussion of RIE concerning computer searches.

Materials announced in CIJE can be located in journals at many university libraries.

Many of the articles can be obtained from University Microfilms. For prices and further information write to:

UMI Article Reprint Department
300 North Zeeb Road
Ann Arbor, Michigan 48106
(800) 521-0600

II. How to Use the Compilation

A. Description of Information in Resumes

Each resume is listed by EW number in numerical order in the resume section. Two samples of resumes are provided to explain the data fields in the resumes. Sample resume #1 is a sample resume of an item not entered into ERIC. Sample resume #2 is a sample resume of an item entered into ERIC; a few additional data elements are in these resumes and are explained.

1. Sample resume of materials not entered in ERIC

a. IRIS NUMBER: EW006023
b. PUBLICATION DATE: FEB 81
c. TITLE: PROGRAMMED APPROACH TO WATER/MASS ANALYSES.
d. PERSONAL AUTHOR: SPENCE, GEORGE R., JR.
e. DESCRIPTOR: *DESIGN; *ENGINEERING; *EQUIPMENT; *MASS BALANCE; *PROJECT DESIGN; *POLLUTION ENGINEERING; *PIPES; *WATER RESOURCES

f. DESCRIPTIVE NOTE: 30-33P.
g. ABSTRACT: DURING THE ENGINEERING PHASE OF A PROJECT DESIGN, WATER REQUIREMENTS OFTEN CHANGE AS NEW INFORMATION BECOMES AVAILABLE. THIS ARTICLE DETAILS A PROGRAMMED APPROACH TO CALCULATION OF A WATER/MASS BALANCE WHICH PROVIDES THE USER WITH THE ABILITY TO READILY ASSESS THE IMPACT OF VARYING WATER QUALITIES, FLOW PATTERNS, AND FLOW RATES. THIS INFORMATION IS THEN USED IN DETERMINING PIPE AND EQUIPMENT SIZES.

h. AVAILABILITY: POLLUTION ENGINEERING; V13 N2

a. IRIS NUMBER -- this is the identification number sequentially assigned to materials as they are processed. Gaps in numbers mean that some items have been deleted, are being processed to add new information, or have been delayed in processing for some reason.

b. PUBLICATION DATE -- date material was published according to information on the material.

c. TITLE

d. PERSONAL AUTHOR -- person or persons who wrote, compiled, or edited the material. Up to two personal authors can be listed.

e. DESCRIPTOR -- subject terms which characterize substantive contents and form of the materials. The major terms are preceeded by an asterisk. Terms used to index all resumes in this compilation can be reviewed in the Subject Index.

f. DESCRIPTIVE NOTE -- various items of information may be contained in this section. For print materials the number of pages is usually listed. The price of the material quoted is the last time information was received from the source. Please note: Prices of nearly all materials are subject to changes and may not be accurate at the time a person orders a specific item.

g. ABSTRACT -- some early materials entered into IRIS did not have abstract information. All materials currently being entered into IRIS have an informative abstract that describes the contents of the item.

h. AVAILABILITY -- information in this field indicates where the material can be obtained.

2. Sample resume of material entered into ERIC (Resources in Education).

Items entered into ERIC (Resources in Education) will have a few additional data fields. See letter references "a" and "b" below.

IRIS ACCESSION NUMBER: EW006664
PUBLICATION DATE: 80
TITLE: RESOURCE DEVELOPMENT OF WATERSHED LANDS: A SIX WEEK SHORT COURSE.
DESCRIPTOR: ADMINISTRATION; ECOLOGICAL FACTORS; ECONOMIC FACTORS; INSTRUCTIONAL MATERIALS; *LAND USE; NATURAL RESOURCES; *POST SECONDARY EDUCATION; *TECHNICAL EDUCATION; *WATER RESOURCES; HYDROLOGY; NATURAL RESOURCES MANAGEMENT; WATER QUALITY; *WATERSHEDS

b. DESCRIPTIVE NOTE: EDRS PRICE: MF01 PLUS POSTAGE-NOT AVAILABLE IN HARD COPY DUE TO MARGINAL LEGIBILITY OF ORIGINAL DOCUMENT.

ABSTRACT: THIS COURSE WAS DESIGNED TO PROVIDE THE WATER RESOURCE TECHNICIAN OR MANAGER WITH INFORMATION WHICH WILL AID IN THE IMPLEMENTATION OF IMPROVEMENTS OF PRESENT LAND USE PRACTICES AND TO ILLUSTRATE ALTERNATIVE CONCEPTS AND TECHNIQUES IN LAND AND WATER USE FOR INCREASING AND IMPROVING THE MULTIPLE PRODUCTS OF WATERSHED LANDS. (ED 197 941)

a. AVAILABILITY: ERIC DOCUMENT REPRODUCTION SERVICE, P. O. BOX 190, ARLINGTON, VA 22210

a. ERIC NUMBER -- the ED number indicates the document has been processed and entered into Resources in Education. This identification number is the number to use when ordering a document or when requesting information about a document.

b. EDRS PRICE -- if material is available through the ERIC Document Reproduction Service, the price of the material when it was entered into the ERIC system and the form of the material is indicated. "MF" means microfiche; "HC" means Xerox copy. Prices are subject to change. Current prices of microfiche and paper copies are listed in the back of each issue of Resources in Education; consult the latest monthly issue for current prices. Information about ordering items can be obtained by contacting:

ERIC Document Reproduction Service (EDRS)
3900 Wheeler Avenue
Alexandria, VA 22304
(703) 823-0550

Items that are available on microfiche (MF) are contained in microfiche collections at over 700 sites where they can be read. For information on the microfiche locations in your state contact the EQ Instructional Resources Center.

B. How to Locate Desired Materials

Users can identify materials of interest by scanning the resume listings, or using the Subject Index or Author Index.

1. Subject Index

The Subject Index is designed to enable the user to search for information on either a broad subject or a narrow information concern. An EW number is included for each item listed under the subject heading. The EW number refers to the abstract entry in the resume section where complete bibliographic information, an abstract of the item, and availability information can be found.

A user can also coordinate a search by checking EW numbers that appear under two or more subject headings. For example, you could check all the EW numbers under Water Treatment and all the EW numbers under Films. EW numbers included under both subject headings would include information relevant to Water Treatment that were films. EW numbers under wastewater treatment and laboratory techniques would provide a list of materials related to Laboratory Techniques and to Wastewater Treatment. Similar techniques could be used to identify other information desired.

Users with ERIC microfiche should check the resume entry. If the document is available on microfiche from the ERIC Document Reproduction Service, the availability will be indicated by "MF" on the resume by "EDRS Price." This means libraries with ERIC microfiche collections should have the document on microfiche.

If you want a document available through the ERIC Document Reproduction Service (EDRS) see the section on ordering documents.

2. Author Index

If you desire to locate a document by the name of the author, you can use the Author Index. EW numbers are provided under the author in the Author Index as in the Subject Index. Some documents do not have a listed author; hence, they are not listed in this index.

III. Correcting an Existing IRIS Record

The IRIS data base will be updated on a quarterly basis. Corrections will be made to the data base at those times. You can help improve IRIS by sending corrections for items you find to be in error.

We request that you duplicate (copy) the resume from the compilation, mark the information you believe to be wrong (or incomplete), and send the marked resume to:

EQ Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212
(614) 422-6717

Corrections of errors will occur in the IRIS tapes at the next update after comments are received.

If you have difficulty obtaining materials from the listed source in the AVAILABILITY section of the resume, please let us know. We will contact the sources to verify whether the materials are available, but your assistance will provide corrections between annual availability checks.

If you are the supplier of materials in IRIS, please let us know if you remove a product from your list, modify a product on your list, or change the price of the product.

IV. Requests to Receive Information about IRIS and the IRC Bulletin

Information regarding IRIS, materials in IRIS, and modifications in the system will be announced in the IRC Bulletin. The Bulletin is issued about four times a year as information is available.

If you are not on the mailing list write to the EQ Instructional Resources Center for subscription information.

If you need information about IRIS you can also phone (614) 422-6717 with your questions.

V. Requests for Assistance in Using IRIS

If you need help in using the IRIS manuals, phone (614) 422-6717 or write to the EQ Instructional Resources Center. Staff are normally available from about 8:30 a.m. to 4:30 p.m. Eastern time to answer your questions.

VI. How to Locate Other Relevant Educational Materials

A number of people have requested information related to such areas as management, basic skills (reading, mathematics, writing) human relations, contract negotiations, and other topics. The EQ Instructional Resources Center has developed or obtained some materials in these areas.

Another excellent source of information for many educational concerns is the ERIC System.

ERIC is a national information system designed and developed by the U.S. Office of Education, and now supported and operated by the National Institute of Education (NIE), for providing ready access to descriptions of exemplary programs, research and development efforts, and related information that can be used in developing more effective educational programs.

There are 16 Clearinghouses in the nationwide ERIC network. Each specializes in a different, multi-discipline, educational area. Each searches out pertinent documents.

The ERIC Clearinghouses have responsibility within the network for acquiring the significant educational literature within their particular areas, selecting the highest quality and most relevant material, processing (i.e., cataloging, indexing, abstracting) the selected items for input to the data base, and also for providing information analysis products and various user services based on the data base.

The 16 ERIC Clearinghouses are listed on the next few pages, together with addresses, telephone numbers, and brief scope notes describing the areas they cover. You can contact them for assistance in locating information relevant to their scope notes.

A. ERIC Clearinghouse on Adult, Career, and Vocational Education
The Ohio State University
National Center for Research in Vocational Education
1960 Kenny Road
Columbus, Ohio 43210
Telephone: (614) 486-3655

Career education, formal and informal at all levels, encompassing attitudes, self-knowledge, decision-making skills, general and occupational knowledge, and specific vocational and occupational skills; adult and continuing education, formal and informal, relating to occupational, family, leisure, citizen, organizational, and retirement roles; vocational and technical education, including new sub-professional fields, industrial arts, and vocational rehabilitation for the handicapped.

B. ERIC Clearinghouse on Counseling and Personnel Services
University of Michigan
School of Education, Room 2108
Ann Arbor, Michigan 48109
Telephone: (313) 764-9492

Preparation, practice, and supervision of counselors at all educational levels and in all settings, theoretical development of counseling and guidance, use and results of personnel procedures such as testing, interviewing, disseminating, and analyzing such information, group work and case work; nature of pupil, student, and adult characteristics; personnel workers and their relation to career planning, family consultations, and student orientation activities.

C. ERIC Clearinghouse on Elementary and Early Childhood Education
University of Illinois
College of Education
805 West Pennsylvania Avenue
Urbana, Illinois 61801
Telephone: (217) 333-1386

Prenatal factors, parental behavior; the physical, psychological, social, educational, and cultural development of children from birth through the primary grades; educational theory, research and practice related to the development of young children.

D. ERIC Clearinghouse on Educational Management
University of Oregon
Library, Room 108
1787 Agate Street
Eugene, Oregon 97403
Telephone: (503) 686-5043

Leadership, management, and structure of public and private educational organizations; practice and theory of administration; preservice and inservice preparation of administrators, tasks and processes of administration, methods and varieties of organization, organizational change, and social context of the organization.

Sites, buildings, and equipment for education; planning, financing, constructing, renovating, equipping, maintaining, operating, insuring, utilizing, and evaluating educational facilities.

E. ERIC Clearinghouse on Handicapped and Gifted Children
Council for Exceptional Children
1920 Association Drive
Reston, Virginia 22091
Telephone: (703) 620-3660

Aurally handicapped, visually handicapped, mentally handicapped, physically handicapped, emotionally disturbed, speech handicapped, learning disabilities, and the gifted; behavioral, psychomotor, and communication disorders, administration of special education services; preparation and continuing education of professional and paraprofessional personnel; preschool learning and development of the exceptional; general studies on creativity.

F. ERIC Clearinghouse on Higher Education
George Washington University
One Dupont Circle, NW, Suite 630
Washington, DC 20036
Telephone: (202) 296-2597

Various subjects relating to college and university students, college and university conditions and problems, college and university programs; curricular and instructional problems and programs, faculty, institutional research; federal programs, professional education (medical, law, etc.), graduate education, university extension programs, teaching-learning, planning, governance, finance, evaluation, interinstitutional arrangements, and management of higher educational institutions.

G. ERIC Clearinghouse on Information Resources
Syracuse University
School of Education
Huntington Hall, Room 030
150 Marshall Street
Syracuse, New York 13210
Telephone: (315) 423-3640

Management, operation, and use of libraries; the technology to improve their operation and the education, training, and professional activities of librarians and information specialists. Educational techniques involved in microteaching, systems analysis, and programmed instruction employing audiovisual teaching aids and technology, such as television, radio, computers, and cable television, communication satellites, microforms, and public television.

H. ERIC Clearinghouse for Junior Colleges
University of California at Los Angeles (UCLA)
Mathematical Sciences Building, Room 8118
405 Hilgard Avenue
Los Angeles, California 90024
Telephone: (213) 825-3931

Development, administration, and evaluation of public and private community junior colleges. Junior college students, staff, curricula, programs, libraries, and community services.

I. ERIC Clearinghouse on Languages and Linguistics
Center for Applied Linguistics
1118 "22nd" Street, NW
Washington, DC 20037
Telephone: (202) 429-9292

Languages and linguistics. Instructional methodology, psychology of language learning, cultural and intercultural content, application of linguistics, curricular problems and developments, teacher training and qualifications, language sciences, psycholinguistics, theoretical and applied linguistics, language pedagogy, bilingualism, and commonly taught languages including English and speakers of other languages.

J. ERIC Clearinghouse on Reading and Communication Skills
National Council of Teacher of English
1111 Kenyon Road
Urbana, Illinois 61801
Telephone: (217) 328-3870

Reading, English, and communication skills, preschool through college. Educational research and development in reading, writing, speaking, and listening. Identification, diagnosis, and remediation of reading problems. Speech communication--forensics, mass communication, interpersonal and small group interaction, interpretation, rhetorical and communication theory, instruction development, speech sciences, and theater. Preparation of instructional staff and related personnel in these areas.

All aspects of reading behavior with emphasis on physiology, psychology, sociology, and teaching. Instructional materials, curricula, tests and measurement, preparation of reading teachers and specialists, and methodology at all levels. Role of libraries and other agencies in fostering and guiding reading. Diagnostic and remedial services in school and clinical settings.

K. ERIC Clearinghouse on Rural Education and Small Schools
New Mexico State University
Box 3AP
Las Cruces, New Mexico 88003
Telephone: (505) 646-2623

Education of Indian Americans, Mexican Americans, Spanish Americans, and migratory farm workers and their children; outdoor education; economic, cultural, social, or other factors related to educational programs in rural areas and small schools; disadvantaged of rural and small school populations.

L. ERIC Clearinghouse for Science, Mathematics and Environmental Education
The Ohio State University
1200 Chambers Road - Room 310
Columbus, Ohio 43212
Telephone: (614) 422-6717

All levels of science, mathematics, and environmental education; development of curriculum and instructional materials; media applications; impact of interest, intelligence, values, and concept development upon learning; preservice and inservice teacher education and supervision.

M. ERIC Clearinghouse for Social Studies/Social Science Education
Social Science Education Consortium, Inc.
855 Broadway
Boulder, Colorado 80302
Telephone: (303) 492-8434

All levels of social studies and social science; all activities relating to teachers; content of disciplines; applications of learning theory, curriculum theory, child development theory, and instructional theory; research and development programs; special needs of student groups; education as a social science; social studies/social science and the community.

N. ERIC Clearinghouse on Teacher Education
American Association of Colleges for Teacher Education (AACTE)
One Dupont Circle, NW, Suite 610
Washington, DC 20036
Telephone: (202) 293-2450

School personnel at all levels, all issues from selection through preservice and inservice preparation and training to retirement; curricula, educational theory and philosophy; general education not specifically covered by Educational Management Clearinghouse; Title XI NDEA Institutes not covered by subject speciality in other ERIC Clearinghouses; all aspects of physical education.

O. ERIC Clearinghouse on Tests, Measurement, and Evaluation
Educational Testing Service (ETS)
Rosedale Road
Princeton, New Jersey 08541
Telephone: (609) 734-5176

Tests and other measurement devices; evaluation procedures and techniques; application of tests, measurement, or evaluation in educational projects of programs.

P. ERIC Clearinghouse on Urban Education
Teachers College, Columbia University
Institute for Urban and Minority Education
Box 40
525 West 120th Street
New York, New York 10027
Telephone: (212) 678-3433

The relationship between urban life and schooling; the effect of urban experiences and environments from birth onward; the academic, intellectual, and social performance of urban children and youth from grade three through college entrance (including the effect of self concept, motivation, and other affective influences), education of urban, Puerto Rican and Asian American populations, and rural and urban black populations; programs and practices which provide learning experiences designed to meet the special needs of diverse populations served by urban schools and which build upon their unique as well as their common characteristics, structural changes in the classroom, school, school system, and community and innovative instructional practices which directly affect urban children and youth; programs, practices, and materials related to economic and ethnic discrimination, segregation, desegregation, and integration in education; issues, programs, practices, and materials related to redressing the curriculum imbalance in the treatment of ethnic minority groups.

Q. Educational Resources Information Center
Central ERIC
National Institute of Education (NIE)
Information Resources Division
1200 - 19th Street, NW
Washington, DC 20208
Telephone: (202) 254-5500

There are other sources of educational information in many states. Included are information dissemination units in the state departments of education, intermediate education units, and local education units. In many cases, a local school administrator or school librarian can help you locate assistance.

VII. How to Order Materials

The AVAILABILITY field in the resume indicates where materials can be obtained. A few of the sources are explained.

A. A number of audiovisual materials can be obtained on a rental basis or purchased from the EQ Instructional Resources Center. Most items previously available from the NTOTC office are available from the EQ Instructional Resources Center at The Ohio State University. For further information write or call.

B. Some of the materials are available through the ERIC Document Reproduction Service. MF (microfiche) are 4" x 6" sheets of microfilm; up to 96 pages of text can be reproduced on one sheet. HC (paper copy) is a reproduction of the document in paper form at the original size.

Order forms for these materials can be obtained from:

ERIC Document Reproduction Service
3900 Wheeler Avenue
Alexandria, VA 22304
(703) 823-0550

C. The EQ Instructional resources Center will provide Xerox copies of materials that are not copyrighted for $1.00 per document plus $0.06 per page.

If you can not obtain materials that are listed or have difficulty obtaining materials, please contact the EQ Instructional Resources Center. We can provide assistance in obtaining materials from some sources. If materials become unavailable, we will remove them from the IRIS data base.

RESUME SECTION

IRIS ACCESSION NUMBER: EW011373

PUBLICATION DATE: 82

TITLE: SLUDGE: RECYCLING FOR AGRICULTURAL USE.

DESCRIPTOR: *AGRICULTURE; *BIOGRO; *COSTS; *LAND APPLICATION; *MANAGEMENT; *METROGRO; OREGON; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT; WISCONSIN; *RECYCLING

DESCRIPTIVE NOTE: 19P. PRICE: $1.50

ABSTRACT: THIS REPORT PROVIDES AN INSIGHT INTO HOW SEVERAL COMMUNITIES HAVE SUCCESSFULLY DEVELOPED SLUDGE MANAGEMENT PROGRAMS THAT INVOLVE THE RECYCLING OF MUNICIPAL SLUDGE FOR AGRICULTURAL USE. INCLUDED ARE REPORTS FROM OREGON AND WISCONSIN.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011634

PUBLICATION DATE: 83

TITLE: SANITARY SURVEY TRAINING. THE NEED-TO-KNOW MATERIAL. STUDENT'S TEXT.

DESCRIPTOR: ADMINISTRATION; *DRINKING WATER; *EVALUATION; *INSPECTION; *INSTRUCTIONAL MATERIALS; MANAGEMENT; *MANUALS; *OPERATIONS (WATER); PLANNING; PUBLIC HEALTH; *RURAL AREAS; STORAGE; *TRAINING; *WATER SYSTEMS; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 190P. PRICE: $12.40

ABSTRACT: A SANITARY SURVEY IS AN ONSITE INSPECTION OF PUBLIC WATER SYSTEM BY COMPETENT PERSONNEL WHO USE A STANDARD FORM, PROCEDURE, AND METHOD TO SURVEY THE EFFECTIVENESS AND MAINTENANCE OF THE SYSTEM AND TO DETERMINE ITS ABILITY TO PROVIDE CONTINUOUSLY SAFE WATER TO THE CONSUMING PUBLIC. THIS TEXT, DEVELOPED AS AN AID TO PROVIDING INSTRUCTION ON HOW TO CONDUCT A SANITARY SURVEY, COVERS BASIC QUESTIONS (AND THEIR RATIONALE AND IMPORTANCE) THAT AN INSPECTOR MUST ASK TO DETERMINE THE ADEQUACY OF A WATER SUPPLY SYSTEM. MAJOR TOPIC AREAS ADDRESSED INCLUDE: (1) WATER REGULATIONS; (2) WATER SOURCES (GENERAL, WELLS, SPRINGS, AND SURFACE SOURCES); (3) PUMPS; (4) WATER TREATMENT; (5) STORAGE (GRAVITY STORAGE AND HYDROPNEUMATIC TANKS); (6) WATER DISTRIBUTION (DISTRIBUTION SYSTEMS AND CROSS-CONNECTIONS); (7) MONITORING AND RECORDKEEPING; (8) MANAGEMENT AND SAFETY; (9) SURVEYS; (10) COMMUNICATIONS AND PUBLIC RELATIONS; AND (11) TECHNICAL ASSISTANCE. BECAUSE THE TEXT IS BASED ON WHAT AN INSPECTOR "NEEDS TO KNOW," IN-DEPTH TECHNICAL BACKGROUND OF EACH COMPONENT OF A WATER SYSTEM IS PROVIDED. HOWEVER, A LISTING OF SUGGESTED REFERENCES IS PROVIDED SHOULD ADDITIONAL INFORMATION BE NEEDED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011635

PUBLICATION DATE: 83

TITLE: SANITARY SURVEY TRAINING. THE NEED-TO-KNOW MATERIAL. INSTRUCTOR'S TECHNICAL MANUAL.

DESCRIPTOR: ADMINISTRATION; *DRINKING WATER; *EVALUATION; *INSPECTION; *INSTRUCTIONAL MATERIALS; MANAGEMENT; *MANUALS; *OPERATIONS (WATER); PLANNING; PUBLIC HEALTH; *RURAL AREAS; STORAGE; *TRAINING; *TEACHING GUIDES; *WATER SYSTEMS; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 372P. PRICE: $23.32

ABSTRACT: THIS MANUAL, DEVELOPED AS AN AID TO STATE AGENCIES WHO PROVIDE INSTRUCTION TO INSPECTORS OF WATER SYSTEMS, IS BASED ON THE MINIMUM INFORMATION THAT AN INSPECTOR WITH LIMITED EXPERIENCE NEEDS TO KNOW TO SUCCESSFULLY ASSESS A PUBLIC WATER SYSTEM. THE MANUAL IS DESIGNED FOR USE BY INDIVIDUALS WHO ARE EXPERTS IN THE FIELD OF WATER SYSTEMS AND SANITARY SURVEYS, BUT WHO MAY NOT BE EXPERIENCED IN INSTRUCTIONAL TECHNIQUES. THE MANUAL (WHICH INCLUDES BASIC TEXT MATERIALS, AUDIOVISUAL, AND EVALUATION EXERCISES AS WELL AS DETAILED INSTRUCTIONS FOR PRESENTING THE MATERIAL AND MANAGING SANITARY TRAINING ACTIVITIES) IS DIVIDED INTO 13 UNITS OF VARYING LENGTH. UNIT TOPICS FOCUS ON WATER REGULATIONS, WATER SOURCES (GENERAL, WELLS, SPRINGS, AND SURFACE SOURCES), PUMPS, WATER TREATMENT, STORAGE (GRAVITY STORAGE AND HYDROPNEUMATIC TANKS), WATER DISTRIBUTION (DISTRIBUTION SYSTEMS AND CROSS-CONNECTIONS), MONITORING AND RECORDKEEPING, MANAGEMENT AND SAFETY, SURVEYS, COMMUNICATIONS AND PUBLIC RELATIONS, AND TECHNICAL ASSISTANCE; ORIENTATION AND CONCLUDING INFORMATION ARE PROVIDED IN SEPARATE UNITS. EACH UNIT INCLUDES A SUMMARY, OBJECTIVES, BASIC MATERIAL (IN OUTLINE FORMAT), INSTRUCTIONAL STRATEGIES, UNIT EMPHASIS, STUDENT PREPARATION, AND PRE-/POST-TESTS. THE OUTLINE APPROACH USED PROVIDES INSTRUCTORS WITH MAXIMUM FLEXIBILITY IN ADAPTING THE MATERIAL TO SPECIFIC SITUATIONS ENCOUNTERED DURING THE CONDUCT OF A SANITARY SURVEY WITHIN A PARTICULAR STATE.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011636

PUBLICATION DATE: 84

TITLE: NPDES COMPLIANCE INSPECTION MANUAL.

DESCRIPTOR: *BIOMONITORING; *COMPLIANCE; *FACILITIES; *FLOW MEASUREMENT; *INSPECTION; *LABORATORY QUALITY ASSURANCE; *NPDES; *OPERATIONS (WASTEWATER); *RECORDKEEPING; *SAMPLING; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 172P. PRICE: $2.50

ABSTRACT: THIS MANUAL CONSOLIDATES AND AMPLIFIES THE INSPECTION INFORMATION CONTAINED IN THE VARIOUS GUIDANCE MANUALS PREVIOUSLY PUBLISHED. RATHER THAN BEING BASED ON INSPECTION TYPES, IT IS BASED ON COMPLIANCE INSPECTION

ACTIVITIES (I.E., SAMPLING, FLOW MEASUREMENT, ETC.) THE DEPTH OF COVERAGE IN THIS MANUAL WILL PROVIDE A QUALIFIED INSPECTOR WITH THE BASIC GUIDANCE NECESSARY TO COMPLETE AN ACCURATE INSPECTION. THE MANUAL IS ORGANIZED INTO EIGHT CHAPTERS. CHAPTER 1 PROVIDES AN INTRODUCTION. CHAPTER 2 DISCUSSES GENERAL PROCEDURES COMMON TO ALL NPDES INSPECTIONS. CHAPTERS 3 THROUGH 8 PROVIDE TECHNICAL INFORMATION. TOPICS INCLUDE (3) RECORDKEEPING AND REPORTING; (4) FACILITY SITE REVIEW; (5) SAMPLING; (6) FLOW MEASUREMENT; (7) BIOMONITORING; AND (8) LABORATORY QUALITY ASSURANCE. IN SOME CASES OLDER INSPECTION MANUALS COVER TECHNICAL ISSUES IN GREATER DEPTH. OLDER MANUALS SHOULD BE RELATED, BUT IN THE EVENT OF CONTRADICTIONS THE NEW CONSOLIDATED MANUAL WILL TAKE PREFERENCE.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011637

PUBLICATION DATE: 81

TITLE: FACILITIES PLANNING 1981. MUNICIPAL WASTEWATER TREATMENT. FRD-20.

DESCRIPTOR: *CONSTRUCTION; *CONSTRUCTION GRANTS; *EPA; *GRANT APPLICATION; *FACILITIES; *FUNDING; *PLANNING; *USEPA; *WASTEWATER TREATMENT; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 127P. PRICE: $8.62

ABSTRACT: THE PURPOSE OF THIS PUBLICATION WAS TO PROVIDE STATES, GRANTEES, AND THE USEPA REGIONAL OFFICES WITH AS MUCH INFORMATION AS POSSIBLE REGARDING FACILITIES PLANNING FOR WASTEWATER COLLECTION AND TREATMENT. SECTIONS INCLUDED ARE (1) BEGINNING FACILITIES PLANNING, (2) PREAPPLICATION, (3) APPLICATION FOR STEP 1 GRANTS, (4) REVIEW, APPROVAL, AND AWARD, (5) PREPARATION OF FACILITIES PLAN, (6) REVIEW, CERTIFICATION, AND APPROVAL OF PLANS, (7) REVIEW AND APPROVAL OF FACILITIES PLANS BY EPA AND (8) APPENDIXES.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011639

PUBLICATION DATE: 83

TITLE: SUMMARY OF DESIGN INFORMATION ON ROTATING BIOLOGICAL CONTACTORS.

PERSONAL AUTHOR: HEIDMAN, JAMES A.; AND OTHERS

DESCRIPTOR: *BIOLOGICAL CONTACTORS; *DESIGN; *EQUIPMENT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PROCESS DESCRIPTIONS; *ROTATING BIOLOGICAL CONTACTORS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 52P. PRICE: $4.12

ABSTRACT: THIS IS A SUMMARY DOCUMENT OF "DESIGN INFORMATION ON ROTATING BIOLOGICAL CONTACTORS" (EPA-600/2-84-106). THIS REPORT PRESENTS IN CONCISE FORM ESSENTIAL INFORMATION ON THE DESIGN, CONSTRUCTION, OPERATION, AND APPLICATION OF THE RBC PROCESS. THIS DOCUMENT IS INTENDED TO PROVIDE A BASIC UNDERSTANDING OF THE PROCESS AND ITS APPLICATION FOR THE TREATMENT OF MUNICIPAL WASTEWATERS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011640

PUBLICATION DATE: 84

TITLE: FINANCIAL MANAGEMENT SYSTEM FOR PUBLICLY-OWNED TREATMENT WORKS (ACCOUNTING OPTIONS).

DESCRIPTOR: *ACCOUNTING; *ADMINISTRATION; *BUDGETING; *COMPUTER APPLICATIONS; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PLANNING; *REGULATIONS; *REVENUE GENERATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 312P. PRICE: $19.72

ABSTRACT: THIS MANUAL PRESENTS A DESIGN FOR A FINANCIAL MANAGEMENT SYSTEM FOR "TYPICAL" PUBLICLY-OWNED TREATMENT WORKS (POTW'S) WHICH GENERALLY CONSIST OF WASTEWATER COLLECTION AND TREATMENT SYSTEMS FOR A DESIGN CAPACITY OF 10 MGD OR LESS. TOPICS ADDRESSED INCLUDE (1) ACCOUNTING, (2) REPLACEMENT RESERVE, (3) REVENUE GENERATION, (4) BUDGETING, (5) PLANNING, (6) GENERAL SYSTEM REQUIREMENTS, (7) COMPUTER SYSTEM REQUIREMENTS, AND (8) GOVERNMENTAL REGULATIONS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011641

PUBLICATION DATE: 83

TITLE: CONSTRUCTION MANAGEMENT EVALUATION AND PROJECT MANAGEMENT CONFERENCE MANUAL.

DESCRIPTOR: *CONFERENCE MANUALS; *CONSTRUCTION MANAGEMENT; CONSTRUCTION; *EVALUATION; *FACILITIES; *FEDERAL GRANTS; *MANAGEMENT; *PROJECT MANAGEMENT; *REPORTS; *USEPA; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 51P. PRICE: $4.06

ABSTRACT: THE PURPOSE OF THIS MANUAL IS TO PROVIDE DETAILED GUIDANCE ON CONDUCT OF PROJECT MANAGEMENT CONFERENCES (PMC) AND CONSTRUCTION MANAGEMENT EVALUATIONS (CME). THESE SITE VISITS ARE INTENDED TO ENHANCE EPA OVERSIGHT AND IMPROVE LOCAL CONSTRUCTION GRANT MANAGEMENT. SECTIONS INCLUDE: (1)

PROJECT MANAGEMENT CONFERENCE; (2) CONVENTIONAL CME; (3) EXTENDED C'S; AND (4) THE REPORT.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011642

PUBLICATION DATE: 81

TITLE: 1980 NEEDS SURVEY. COST ESTIMATES FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES. FRD-19.

DESCRIPTOR: *ADVANCED WASTE TREATMENT; *COSTS; *EPA; *FACILITIES; *FEDERAL ROLE; *NEEDS; *OPERATIONS (WASTEWATER); *SECONDERAY TREATMENT; *SEWERS; *SURVEYS; *WASTEWATER TREATMENT; *WASTEWATER COLLECTION; *WATER QUALITY

DESCRIPTIVE NOTE: 97P. PRICE: $6.82

ABSTRACT: THIS BROCHURE IS THE FIFTH NEEDS SURVEY CONDUCTED SINCE THE ENACTMENT OF PL 92-500. PREVIOUS SURVEYS WERE CONDUCTED IN 1973, 1974, 1976, AND 1978. INCLUDED IN THIS REPORT ARE A DETAILED ESTIMATE OF THE COST OF CONSTRUCTION OF ALL NEEDED PUBLICLY-OWNED WASTEWATER TREATMENT WORKS IN EACH OF THE STATES TO MEET 1983 GOALS. ALSO INCLUDED IN THIS REPORT ARE ESTIMATES OF THE TOTAL CURRENT EXPENDITURES FOR MUNICIPAL WASTE TREATMENT IN THE NATION, AS WELL AS PROJECTIONS OF THOSE COSTS TO THE YEAR 2000.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011643

PUBLICATION DATE: 79

TITLE: PROCEEDINGS: NATIONAL CONFERENCE ON WATER CONSERVATION AND MUNICIPAL WASTEWATER FLOW REDUCTION. NOV 28 & 29, 1978. CHICAGO, IL.

DESCRIPTOR: *CASE STUDIES; *CONFERENCE PROCEEDINGS; *CONSERVATION; *FLOW REDUCTION; *ISSUES; *MANAGEMENT; *PUBLIC PARTICIPATION; *REGULATIONS; *WATER RESOURCES; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT; *WATER CONSERVATION

DESCRIPTIVE NOTE: 302P. PRICE: $19.1[illegible]

ABSTRACT: THIS IS THE PROCEEDINGS OF A TWO-DAY CONFERENCE ON WATER AND WASTEWATER MANAGEMENT AND HOW THESE CONCERNS RELATE TO CONSERVATION. THE CONFERENCE FOCUSED MAINLY UPON MUNICIPAL AND HOUSEHOLD CONSERVATION MEASURES. SECTIONS INCLUDED ARE: (1) PERSPECTIVE ON THE PROBLEM; (2) REGULATION OF THE WATER RESOURCE; (3) WATER CONSERVATION TECHNOLOGY; (4) EDUCATION AND PUBLIC PARTICIPATION; (5) WATER AND WASTEWATER MANAGEMENT ISSUES; AND (6) CASE STUDIES OF WATER

RESOURCE MANAGEMENT.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011644

PUBLICATION DATE: 80

TITLE: REPORT TO CONGRESS: INDUSTRIAL COST RECOVERY. SUPPLEMENTAL ANALYSIS AND RECOMMENDATIONS.

DESCRIPTOR: *CONGRESSIONAL REPORTS; *COSTS; *EPA; *COST RECOVERY; *INDUSTRIAL COST RECOVERY; *INDUSTRY; *FEDERAL PROGRAMS; *PROGRAM EVALUATION; *RECOMMENDATIONS; *USEPA; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 59P. PRICE: $4.54

ABSTRACT: THIS REPORT WAS PREPARED FOR CONGRESS BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA) TO SUPPLEMENT THE PREVIOUS REPORT TO CONGRESS SUBMITTED IN 1979. SOME AGENCY CONCERNS AND PROBLEMS WITH THE 1979 REPORT ARE PRESENTED. THIS SUPPLEMENTAL REPORT PROVIDES SOME LEGISLATIVE HISTORY ON INDUSTRIAL COST RECOVERY (ICR), EXAMINATION OF WHETHER THE ICR PROGRAM AT THAT TIME WAS ACHIEVING ITS PURPOSES, AND A CONSIDERATION OF CHANGES IN THE ICR PROVISIONS THAT WOULD ASSIST IN ESTABLISHING EFFICIENT AND RESPONSIBLE REVENUE PROGRAMS AT THE LOCAL LEVEL AND PROVIDE COMPLIANCE WITH NATIONAL POLLUTION CONTROL REQUIREMENTS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011645

PUBLICATION DATE: 82

TITLE: 1982 NEEDS SURVEY: COST ESTIMATES FOR CONSTRUCTION OF PUBLICLY-OWNED WASTEWATER TREATMENT FACILITIES.

DESCRIPTOR: *ADVANCED TREATMENT; *COSTS; *CONSTRUCTION; *FACILITIES; *INFILTRATION; *INFLOW; *REHABILITATION; *NEEDS ASSESSMENT; *PLANNING; *SECONDARY TREATMENT; *SURVEYS; *SEWERS; *WASTEWATER TREATMENT; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 91P. PRICE: $6.46. FOR RELATED DOCUMENT SEE EW 011 646

ABSTRACT: THIS SURVEY MODIFIED AND UPDATED THE COMPREHENSIVE COST ESTIMATES OF THE PREVIOUS FIVE SURVEYS FOR CONSTRUCTING ALL GRANT-ELIGIBLE MUNICIPAL TREATMENT WORKS NEEDED BY EXISTING AND FUTURE POPULATIONS. IT REAFFIRMED THAT MEETING WATER QUALITY GOALS WILL REQUIRE A SUBSTANTIAL INVESTMENT. DATA ARE INCLUDED ON A VARIETY OF TOPICS RELATED TO WASTEWATER COLLECTION AND TREATMENT.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO

STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011646

PUBLICATION DATE: 83

TITLE: ADDENDUM TO 1982 NEEDS SURVEY: COST ESTIMATES FOR CONTROL OF COMBINED SEWER DISCHARGE TO MARINE BAYS AND ESTUARIES.

DESCRIPTOR: *COMPLIANCE; *BAYS; *COSTS; *CONSTRUCTION; *EFFLUENTS; *ESTUARIES; *MARINE ENVIRONMENT; *MANAGEMENT; *NEEDS ASSESSMENT; *PLANNING; *SEWERS; *SEWAGE; *SURVEYS; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 30P. PRICE: $3.34. FOR RELATED DOCUMENT SEE EW 011 645

ABSTRACT: THIS IS AN ADDENDUM TO THE 1982 NEEDS SURVEY. THE ADDENDUM PRESENTS A LIST OF COMBINED SEWER FACILITIES DISCHARGING TO OR AFFECTING THE TIDALLY-INFLUENCED COASTAL WATERS OF BAYS AND ESTUARIES AND THEIR ESTIMATED CONTROL COSTS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011647

PUBLICATION DATE: 78

TITLE: WASTEWATER STABILIZATION POND LININGS. MCD-54.

DESCRIPTOR: *COSTS; *DESIGN; *CONSTRUCTION; *LAGOON LININGS; *LAGOONS; *LITERATURE REVIEWS; *PERFORMANCE EVALUATION; *RECOMMENDATIONS; *SURVEYS; *WASTEWATER TREATMENT; *WASTEWATER STABILIZATION

DESCRIPTIVE NOTE: 116P. PRICE: $7.96

ABSTRACT: THIS REPORT PRESENTS A REVIEW OF THE LITERATURE ON WASTEWATER STABILIZATION LAGOON LININGS FOR A PERIOD OF ABOUT 20 YEARS. A SURVEY OF 50 STATES WAS CONDUCTED TO DETERMINE THE REQUIREMENTS FOR LINERS AND ALLOWABLE SEEPAGE RATES. RECOMMENDATIONS OF THE MANUFACTURERS AND INSTALLERS ARE ALSO PRESENTED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011650

PUBLICATION DATE: 83

TITLE: AFFLUENT EFFLUENT: NEW CHOICES IN WASTEWATER TREATMENT.

DESCRIPTOR: ALTERNATIVE TECHNOLOGY; *CASE STUDIES; *EFFLUENTS; *FACILITIES; *INSTRUCTIONAL MATERIALS; *ONSITE WASTEWATER SYSTEMS; *OPERATIONS (WASTEWATER); *POSTSECONDARY EDUCATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 60P. PRICE: $4.60

ABSTRACT: THIS PUBLICATION IS A COLLECTION OF CASE HISTORIES ILLUSTRATING THE SUCCESSFUL USE OF INNOVATIVE AND ALTERNATIVE WASTEWATER TREATMENT SYSTEMS. IT IS A COMPANION GUIDE TO THE FILM "AFFLUENT EFFLUENT."

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011651

PUBLICATION DATE: 84

TITLE: BEFORE AND AFTER CASE STUDIES: COMPARISONS OF WATER QUALITY FOLLOWING MUNICIPAL TREATMENT PLANT IMPROVEMENTS.

PERSONAL AUTHOR: LEO, WILLIAM M.; AND OTHERS

DESCRIPTOR: *EFFLUENTS; *FACILITIES; *FACILITY IMPROVEMENTS; *MODELS; *ENVIRONMENTAL IMPACTS; *OXYGEN; *NITROGEN; *PERFORMANCE EVALUATION; *RIVERS; *TRENDS; *WATER QUALITY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 208P. PRICE: $13.48

ABSTRACT: THIS STUDY WAS DIRECTED TOWARD THE OVERALL ISSUE OF DETERMINING BEFORE AND AFTER RESPONSES OF RIVER SYSTEMS FOLLOWING INSTALLATION OF IMPROVEMENTS IN MUNICIPAL WASTEWATER TREATMENT FACILITIES. OUTPUT FROM THE STUDY INCLUDES ACTUAL MEASURED WATER QUALITY IMPROVEMENTS AFTER CONSTRUCTION OF AN UPGRADED TREATMENT FACILITY. THE STUDY ALSO PROVIDES AS ASSESSMENT OF THE ACCURACY OF WATER QUALITY MODELS USED AS PLANNING TOOLS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011652

PUBLICATION DATE: 84

TITLE: USER CHARGE GUIDANCE MANUAL FOR PUBLICLY-OWNED TREATMENT WORKS.

DESCRIPTOR: *COSTS; *FINANCES; *REGULATIONS; *RATES; *RECORDKEEPING; *USER CHARGES SYSTEMS; *USER CHARGES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 30P. PRICE: $2.80

ABSTRACT: THIS DOCUMENT OFFERS GUIDELINES FOR THE DEVELOPMENT OF USER CHARGE SYSTEMS. THE INTENT OF THIS MANUAL IS TO ASSIST WASTEWATER TREATMENT WORKS MANAGERS IN UNDERSTANDING THE VARIOUS PROCEDURES NEEDED TO DEVELOP A USER CHARGE SYSTEM AND OTHER COST RECOVERY CONCEPTS. THE MATERIAL CONSIDERS: (1) THE TYPES OF PERSONNEL NEEDED TO DEVELOP AND OPERATE A USER CHARGE SYSTEM; (2) ORGANIZATIONAL STRUCTURE AND SUPPORT FUNCTIONS; (3) RATE SETTING METHODOLOGY; (4) USER CHARGE ORDINANCES; (5) OVERALL REVENUE RECOVERY; AND (6) EPA REGULATIONS CONCERNING USER CHARGE SYSTEMS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011653

PUBLICATION DATE: 84

TITLE: CONSTRUCTION GRANTS 1985 (CG-85).

DESCRIPTOR: *CONSTRUCTION; *CONSTRUCTION GRANTS; *DESIGN; *FACILITIES; *FEDERAL PROGRAMS; *FUNDING; *OPERATIONS (WASTEWATER); *RECOMMENDATIONS; *REGULATIONS; *USEPA; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 500P. PRICE: $11.00

ABSTRACT: THIS BOOK IS A PART OF THE USEPA'S EFFORTS TO SIMPLIFY AND DELEGATE THE MUNICIPAL CONSTRUCTION GRANTS PROGRAM. GUIDANCE IS DISCRETIONARY AND PROVIDES INFORMATION AND SUGGESTIONS TO HELP COMMUNITIES SUCCESSFULLY PLAN, DESIGN, AND BUILD MUNICIPAL SEWAGE TREATMENT WORKS. A MAJOR PURPOSE OF THIS DOCUMENT IS TO HELP COMMUNITIES SEEKING OR MANAGING A CONSTRUCTION GRANT TO COMPLY WITH ALL PROGRAM REQUIREMENTS CONTAINED IN FEDERAL REGULATIONS. THE PUBLICATION IS DIVIDED INTO FOUR MAJOR PARTS: (1) PLANNING, (2) DESIGN, (3) CONSTRUCTION AND INITIAL OPERATION, AND (4) FINANCIAL/PROCUREMENT.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011659

PUBLICATION DATE: 82

TITLE: SLUDGE AND THE LAND: THE ROLE OF SOIL AND WATER CONSERVATION DISTRICTS IN LAND APPLICATION OF SEWAGE SLUDGE. FINAL REPORT.

DESCRIPTOR: *CASE STUDIES; *LAND APPLICATION; *MANAGEMENT; *RECOMMENDATIONS; *SEWAGE SLUDGE; *SLUDGE; *SOIL; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 21P. PRICE: $2.26

ABSTRACT: THIS BOOKLET IS AIMED AT FACILITATING COMMUNICATION BETWEEN RURAL AND URBAN AREAS IN ASSESSING SEWAGE SLUDGE MANAGEMENT OPTIONS INVOLVING LAND APPLICATION. THE BOOKLET BRIEFLY DESCRIBES ALTERNATIVE BENEFICIAL USES FOR SLUDGE, ALTERNATIVE ROLES FOR SOIL AND WATER CONSERVATION DISTRICTS IN LAND APPLICATION OF SLUDGE, THE DIFFERENCE BETWEEN A "GOOD" AND "BAD" SLUDGE FOR LAND APPLICATION, FACTORS INVOLVED IN DESIGNING A SLUDGE APPLICATION PROGRAM FOR AGRICULTURAL LAND, AND CASE HISTORIES OF INVOLVEMENT OF AGRICULTURAL AGENCIES IN LAND APPLICATION.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011660

PUBLICATION DATE: 80

TITLE: INNOVATIVE TECHNOLOGY: MEETING THE CHALLENGE OF THE 80'S.

DESCRIPTOR: *CASE HISTORIES; *COSTS; *ENERGY CONSERVATION; *INNOVATIVE TECHNOLOGY; *OPERATIONS (WASTEWATER); *RECYCLING; *SURFACE DISCHARGES; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 32P. PRICE: $2.92

ABSTRACT: THIS PUBLICATION DISSEMINATES INFORMATION ON INNOVATIVE TECHNOLOGY IN CONTEXT OF THE INITAL THREE YEAR I/A PROGRAM. THE PRESENTATION INCLUDES A BRIEF DISCUSSION OF INNOVATIVE TECHNOLOGY AND THE CONCEPT OF RISK. FINALLY, SEVERAL SELECTED CASE HISTORIES ARE FEATURED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011661

PUBLICATION DATE: 79

TITLE: HOW TO WRITE A PUBLIC NOTICE: A COLLECTION OF EXAMPLES.

DESCRIPTOR: *CONSTRUCTION GRANTS PROGRAM; *HEARINGS; *MEETING ANNOUNCEMENTS; *PUBLIC PARTICIPATION; *PUBLIC NOTICES; *PUBLICITY; *RECOMMENDATIONS; *USEPA; *WRITING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 22P. PRICE: $2.32

ABSTRACT: THIS PUBLICATION HAS BEEN DEVELOPED TO PROVIDE SOME PRINCIPLES REGARDING PUBLIC NOTICES, A PUBLIC NOTICE CHECKLIST, EXAMPLES WHICH HAVE BEEN USED IN ENVIRONMENTAL PROGRAMS, AND COMMENTARY ON THESE EXAMPLES WHICH HIGHLIGHTS THEIR STRONG AND WEAK POINTS. THIS BRIEF GUIDE IS FOR AGENCY AND GRANTEE STAFF IN THE WASTEWATER TREATMENT CONSTRUCTION GRANTS PROGRAM WHO HAVE LITTLE OR NO EXPERIENCE IN WRITING

INFORMATION FOR THE PUBLIC OR WORKING WITH THE MEDIA.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011662

PUBLICATION DATE: 75

TITLE: EVALUATION OF LAND APPLICATION SYSTEMS. MCD-7.

DESCRIPTOR: *DESIGN; *EVALUATION; *FACILITIES; *LAND APPLICATION; *MAINTENANCE; *OPERATIONS (W/STEWATER); *PLANNING; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 182P. PRICE: $11.92

ABSTRACT: THIS BULLETIN CONSISTS OF AN EVALUATION CHECKLIST AND PARALLEL BACKGROUND INFORMATION AND IS DIVIDED INTO THREE MAJOR PARTS DEALING WITH: (1) FACILITIES PLANS; (2) DESIGN PLANS AND SPECIFICATIONS; AND (3) OPERATION AND MAINTENANCE MANUALS. THE BULLETIN IS NOT INTENDED TO BE USED AS A COMPREHENSIVE DESIGN MANUAL.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011664

PUBLICATION DATE: 83

TITLE: REGULATION AND POLICY MATRIX: A GUIDE TO THE RULES GOVERNING GRANTS AWARDED UNDER THE CONSTRUCTION GRANTS PROGRAM.

DESCRIPTOR: *ADMINISTRATION; *CONSTRUCTION GRANTS; *DESIGN; *EPA; *ELIGIBILITY; *FACILITIES; *POLICIES; *REGULATIONS; *USEPA; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 163P. PRICE: $10.78

ABSTRACT: THIS PUBLICATION PROVIDES A "REGULATION AND POLICY MATRIX" FOR IDENTIFYING THE USEPA'S REGULATIONS AND POLICIES APPLICABLE TO GRANTS AWARDED UNDER THE MUNICIPAL CONSTRUCTION GRANTS PROGRAM. THE PUBLICATION WAS DEVELOPED IN ORDER TO CLEARLY DELINEATE THE REGULATIONS AND POLICIES IN EFFECT AT THE TIME OF EACH GRANT AWARD, SO THAT BOTH AUDITORS AND CONSTRUCTION GRANT PERSONNEL WOULD HAVE AN ACCURATE AND COMPLETE BODY OF KNOWLEDGE CONCERNING WHICH REGULATIONS AND POLICIES WERE IN EFFECT DURING THE LIFE OF EACH PROJECT.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011669

PUBLICATION DATE: 78

TITLE: USEPA REPORT TO THE CONGRESS OF THE UNITED STATES ON WASTEWATER TREATMENT CONTRACTING AND BID SHOPPING.

DESCRIPTOR: *BIDDING; *CONTRACTING; *EPA; *EQUIPMENT; *FACILITIES; *EVALUATION; *PROGRAM EVALUATION; *POLICIES; *PURCHASING; *REGULATIONS; *USEPA; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 218P. PRICE: $14.08

ABSTRACT: THIS STUDY WAS DESIGNED TO EVALUATE THE EMPHASIS ON LOW-DOLLAR TREATMENT EQUIPMENT AND WHETHER PRINCIPAL SUBCONTRACTORS AND EQUIPMENT SUPPLIERS SHOULD BE NAMED IN BID SUBMISSIONS ON CONSTRUCTION GRANT PROJECTS TO PREVENT BID SHOPPING. THE REPORT ATTEMPTED TO DEFINE THE SCOPE AND CONTEXT OF THE ISSUES AND THE EXTENT TO WHICH REMEDIAL ACTIONS COULD BE UTILIZED AND THE ADVISABILITY OF ALTERING POLICIES. THE REPORT CONCLUDED THAT NEITHER REGULATION CHANGES NOR FURTHER LEGISLATION WERE NECESSARY OR APPROPRIATE.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011670

PUBLICATION DATE: 83

TITLE: REPORT ON EPA OPERATOR TRAINING PROGRAMS.

DESCRIPTOR: *FEDERAL ROLE; *LEGISLATION; *OPERATOR TRAINING; *STATE ROLE; *TRAINING; *USEPA; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 25P. PRICE: $2.50

ABSTRACT: THIS REPORT WAS DEVELOPED TO PROVIDE A BROAD OVERVIEW OF PAST AND PRESENT FEDERAL OPERATOR TRAINING PROGRAMS. THE CONTENTS OF THE REPORT PROVIDE A REVIEW OF PROGRAMS SINCE THE LATE 1960'S, THE STATUS OF EPA SUPPORT FOR OPERATOR TRAINING (1983), AND THE FRAMEWORK FOR ADMINSTERING A LIMITED FEDERAL SUPPORT PROGRAM.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011671

PUBLICATION DATE: 84

TITLE: GUIDANCE FOR SEWER SYSTEM EVALUATION.

DESCRIPTOR: *CLEANING; *EVALUATION; *INSPECTION; *INFILTRATION; *INFLOW; *GUIDELINES; *REFERENCE MANUALS; *REGULATIONS; *SURVEYS; *SEWERS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 13P. PRICE: $1.78

ABSTRACT: THIS DOCUMENT IS INTENDED TO PROVIDE ENGINEERS, MUNICIPALITIES, AND REGULATORY AGENCIES WITH GUIDANCE ON SEWER SYSTEM EVALUATION. SECTIONS ARE INCLUDED ON INFILTRATION/INFLOW ANALYSIS, PHYSICAL SURVEYS, RAINFALL SIMULATION, CLEANING, INTERNAL INSPECTION, AND REPORTING. REGULATIONS ARE DATED 1974.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011677

PUBLICATION DATE: 80

TITLE: SOURCE SEPARATION COLLECTION AND PROCESSING EQUIPMENT: A USER'S GUIDE.

DESCRIPTOR: *COLLECTION SYSTEMS; *EQUIPMENT; *GUIDES; *PROCESSING SYSTEMS; *RESOURCE RECOVERY; *SOLID WASTES; *SOURCE SEPARATION; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 62P. PRICE: $4.72

ABSTRACT: THIS GUIDE IS DESIGNED TO ASSIST THOSE WHO HAVE OR ARE DEVELOPING SOURCE SEPARATION PROGRAMS BY PROVIDING THEM WITH DETAILED INFORMATION ON SYSTEMS AND EQUIPMENT. THE GUIDE COVERS SUCCESSFUL SYSTEMS AND LISTS THE ADVANTAGES, DISADVANTAGES, AND GENERAL SPECIFICATIONS OF EACH PIECE OF EQUIPMENT DESCRIBED. CHAPTER ONE COVERS COLLECTION SYSTEMS AND EQUIPMENT. CHAPTER TWO COVERS PROCESSING SYSTEMS AND EQUIPMENT.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS RD., ROOM 310, COLUMBUS, OHIO 43212

IRIS ACCESSION NUMBER: EW011709

PUBLICATION DATE: 83

TITLE: BASIC INSTRUCTIONAL TECHNOLOGY PARTICIPANT REFERENCE MANUAL. DECEMBER 1983.

PERSONAL AUTHOR: HORTON, DEBBIE

DESCRIPTOR: BEHAVIORIAL OBJECTIVES; EVALUATION METHODS; *INSTRUCTIONAL MATERIALS; *INSTRUCTIONAL DEVELOPMENT; LESSON PLANS; *POSTSECONDARY EDUCATION; SKILL DEVELOPMENT; TRAINING; *TRAINING METHODS; *TEACHING SKILLS; *TEACHER EDUCATION; TASK ANALYSIS; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 179P. PRICE: $10.00

ABSTRACT: AS PART OF THE OVERALL GOAL OF THE ENVIRONMENTAL PROTECTION AGENCY (EPA) TO HELP PROVIDE ENVIRONMENTAL PROFESSIONALS WITH THE SKILLS REQUIRED TO PLAN AND DELIVER TRAINING PROGRAMS, THIS PARTICIPANT MANUAL (AND RELATED STAFF GUIDE) HAVE BEEN DEVELOPED FOR CONDUCTING A WORKSHOP

IN BASIC INSTRUCTIONAL TECHNOLOGY. THE WORKSHOP CONSISTS OF 12 UNITS TOTALLING APPROXIMATELY 25-35 HOURS OF CLASSROOM TIME IF THE ENTIRE COURSE IS PRESENTED. EACH UNIT INCLUDES AN OVERVIEW, UNIT LESSONS (WITH THE CORRESPONDING LEARNING ACTIVITIES), AND LISTS OF OBJECTIVES AND RESOURCES NEEDED FOR THE LESSONS. THE EMPHASIS OF THE UNITS IS ON THE DEVELOPMENT OF THE BASIC, PRACTICAL SKILLS OF: IDENTIFYING INSTRUCTIONAL NEEDS; SPECIFYING OBJECTIVES; PLANNING INSTRUCTION; LOCATING SUPPORT MATERIALS; CONDUCTING INSTRUCTION USING VARIOUS FORMATS AND EFFECTIVE SPEAKING TECHNIQUES; AND EVALUATING THE PERFORMANCE OF THOSE WHO RECEIVE THE INSTRUCTION. MOST OF THE CONTENT IS TREATED ON A STRICTLY APPLIED BASIS WITH A MINIMUM OF THEORY AND TECHNICAL EXPLANATIONS. INSTRUCTIONAL ACTIVITIES INCLUDE LECTURES, GUIDED DISCUSSIONS, DEMONSTRATIONS, INDIVIDUAL ASSIGNMENTS, AND READINGS. MATERIALS IN APPENDICES INCLUDE REFERENCES, A GLOSSARY, AND A DESCRIPTION OF OTHER UNITED STATES EPA INSTRUCTIONAL SUPPORT SERVICES AND MATERIALS.

AVAILABILITY: EPA INSTRUCTIONAL RECOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011751

PUBLICATION DATE: 83

TITLE: BASIC INSTRUCTIONAL TECHNOLOGY. STAFF GUIDE.

PERSONAL AUTHOR: HORTON, DEBBIE

DESCRIPTOR: BEHAVIORAL OBJECTIVES; EVALUATION METHODS; *INSTRUCTIONAL MATERIALS; *INSTRUCTIONAL DEVELOPMENT; LESSON PLANS; POSTSECONDARY EDUCATION; STAFF DEVELOPMENT; SKILL DEVELOPMENT; TRAINING; *TRAINING METHODS; *TEACHING GUIDES; *TEACHING SKILLS; *TEACHER EDUCATION; TASK ANALYSIS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 290P. PRICE: $10.00. FOR RELATED DOCUMENT SEE EW 011 709

ABSTRACT: AS PART OF THE OVERALL GOAL OF THE ENVIRONMENTAL PROTECTION AGENCY (EPA) TO HELP PROVIDE ENVIRONMENTAL PROFESSIONALS WITH THE SKILLS REQUIRED TO PLAN AND DELIVER TRAINING PROGRAMS, THIS STAFF GUIDE (AND RELATED PARTICIPANT MANUAL) HAVE BEEN DEVELOPED FOR CONDUCTING A WORKSHOP IN BASIC INSTRUCTIONAL TECHNOLOGY. THE WORKSHOP CONSISTS OF 12 UNITS TOTALLING APPROXIMATELY 25-35 HOURS OF CLASSROOM TIME IF THE ENTIRE COURSE IS PRESENTED. EACH UNIT INCLUDES AN OVERVIEW, A LIST OF UNIT OPTIONS, AND LESSON PLANS. EACH LESSON PLAN INCLUDES A RATIONALE, OBJECTIVE, EVALUATION ACTIVITIES, RESOURCES, AND RECOMMENDED INSTRUCTIONAL APPROACH(S). THE EMPHASIS OF THE UNITS IS ON THE DEVELOPMENT OF THE BASIC, PRACTICAL SKILLS OF: IDENTIFYING INSTRUCTIONAL NEEDS; SPECIFYING OBJECTIVES; PLANNING INSTRUCTION; LOCATING SUPPORT MATERIALS; CONDUCTING INSTRUCTION USING VARIOUS FORMATS AND EFFECTIVE SPEAKING TECHNIQUES; AND EVALUATING THE PERFORMANCE OF THOSE WHO RECEIVE THE INSTRUCTION. MOST OF THE CONTENT IS TREATED ON A STRICTLY APPLIED BASIS WITH A MINIMUM OF THEORY AND TECHNICAL EXPLANATIONS. THE INSTRUCTIONAL ACTIVITIES INCLUDE LECTURES, GUIDED DISCUSSIONS, DEMONSTRATIONS, INDIVIDUAL ASSIGNMENTS, AND

READINGS. MATERIALS IN APPENDICES INCLUDE REFERENCES AND GLOSSARY. A DESCRIPTION OF OTHER EPA INSTRUCTIONAL SUPPORT SERVICES AND MATERIALS, AND OVERHEAD PROJECTOR TRANSPARENCY MASTERS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011787

PUBLICATION DATE: 84

TITLE: INNOVATIVE AND ALTERNATIVE TECHNOLOGY PROJECTS: A PROGRESS REPORT. SEPTEMBER 1984.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *EQUIPMENT; *FACILITIES; *INNOVATIONS; *OPERATIONS (WASTEWATER); *SLUDGE; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 39P. PRICE: $3.34

ABSTRACT: THIS ANNUAL SUMMARY IS BASED ON INFORMATION FROM GRANT AWARDS THROUGH MARCH FOR THE YEAR OF ISSUE AS PROVIDED BY STATE AGENCIES OR EPA REGIONAL OFFICES. INFORMATION IS PROVIDED GIVING SITE OF THE INNOVATION, PROCESS OR INNOVATION BEING USED, DESIGN FLOW, BASIS OF APPROVAL, AND DESIGN CONSULTING FIRM.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011820

PUBLICATION DATE: 84

TITLE: INDEPENDENT PHYSICAL-CHEMICAL (IPC) TREATMENT OF MUNICIPAL WASTEWATER: DESIGN AND OPERATIONS FEEDBACK.

DESCRIPTOR: *CHEMICAL TREATMENT; *EQUIPMENT; *DESIGN; *FILTRATION; *LIME HANDLING SYSTEMS; *GRANULAR ACTIVATED CARBON; *OPERATIONS (WASTEWATER); *PHYSICAL TREATMENT; *PERFORMANCE EVALUATION; *RECOMMENDATIONS; *UNIT PROCESSES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 56P. PRICE: $4.36

ABSTRACT: THIS REPORT PRESENTS THE RESULTS OF AN INVESTIGATION OF 11 INDEPENDENT PHYSICAL-CHEMICAL (IPC) TREATMENT PLANTS, CONDUCTED AS PART OF A NATIONWIDE ADVANCED WASTE TREATMENT (AWT) EFFECTIVENESS EVALUATION SPONSORED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY (U.S. EPA). THE RESULTS OF THE INVESTIGATION INDICATED THAT VIRTUALLY ALL OF THESE PLANTS ARE EXPERIENCING DIFFICULTIES WITH ONE OR MORE OF THEIR TREATMENT PROCESSES. IPC TREATMENT, AS THE NAME IMPLIES, INVOLVES THE UTILIZATION OF ONLY PHYSICAL AND CHEMICAL TREATMENT PROCESSES (E.G., CLARIFICATION, FILTRATION, CARBON ADSORPTION, ION-EXCHANGE, ETC.) FOR THE TREATMENT OF WASTEWATER. THIS DOCUMENT BRIEFLY OUTLINES THE

PROBLEMS ENCOUNTERED AT IPC PLANTS AND PROVIDES A LIMITED DISCUSSION OF THE IMPACTS OF THESE PROBLEMS ON THE PLANT'S PERFORMANCE. POTENTIAL REMEDIES TO THE PROBLEMS IDENTIFIED BY THIS INVESTIGATION ARE ALSO OUTLINED IN THIS DOCUMENT. THESE REMEDIES SHOULD BE APPLIED ONLY AFTER AN ENGINEER EXPERIENCED WITH THE DESIGN AND OPERATION OF IPC PROCESSES HAS THOROUGHLY EVALUATED A FACILITY TO DETERMINE WHICH SOLUTIONS ARE PRACTICAL AND COST-EFFECTIVE.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011848

PUBLICATION DATE: 80

TITLE: NATIONAL ACCOMPLISHMENTS IN POLLUTION CONTROL: 1970-1980. SOME CASE HISTORIES.

DESCRIPTOR: *CASE HISTORIES; *AIR POLLUTION CONTROL; *ENVIRONMENTAL EMERGENCIES; *EVALUATION; *LAND; *NATURAL SYSTEMS; *NOISE; *PLANNING; *REPORTS; *POLLUTION CONTROL; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 153P. PRICE: $10.18. FOR RELATED DOCUMENT SEE EW 006 034

ABSTRACT: THIS IS A COLLECTION OF CASE HISTORIES THAT DESCRIBE SUCCESSFUL EFFORTS ACROSS THE NATION OVER THE LAST 10 YEARS (1970-1980) TO CLEAN UP OR PREVENT FURTHER DETEIORATION OF THE ENVIRONMENT. THE REPORT ALSO EMPHASIZES MANY CHALLENGES THAT FACE US. SECTIONS ARE INCLUDED ON WATER, AIR, NATURAL SYSTEMS, LAND, NOISE, RESPONDING TO ENVIRONMENTAL EMERGENCIES, AND PLANNING.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011887

PUBLICATION DATE: 84

TITLE: DEMONSTRATION OF THERMOPHILIC AEROBIC-ANAEROBIC DIGESTION AT HAGERSTOWN, MARYLAND.

PERSONAL AUTHOR: HAAS, OSCAR W.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *AEROBIC DIGESTION; *ANEROBIC DIGESTION; *ENERGY CONSERVATION; *OPERATIONS (WASTEWATER); *OXYGEN; *PATHOGENS; *SLUDGE; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 120P. PRICE: $8.20

ABSTRACT: THIS REPORT DESCRIBES THE SUCCESSFUL OPERATION OF A NEW AND NOVEL APPROACH TO DIGESTION OF SLUDGE AT THE HAGERSTOWN WASTEWATER TREATMENT PLANT. THE PROCESS, KNOWN AS DUAL DIGESTION, INVOLVED THE COUPLING OF A FULL-SCALE EXPERIMENTAL AEROBIC REACTOR TO AN EXISTING FULL-SCALE ANAEROBIC DIGESTER FOR THE TREATMENT OF HAGERSTOWN'S RAW

SLUDGE. IN THE PROCESS, SLUDGE IS AEROBICALLY DIGESTED AT THERMOPHILIC CONDITIONS, USING PURE OXYGEN FOR ABOUT ONE DAY, FOLLOWED BY A LONGER PERIOD OF 8 TO 16 DAYS OF MESOPHILIC (OR THERMOPHILIC) ANAEROBIC DIGESTION. PATHOGEN ANALYSES OF THE RAW AND DIGESTED SLUDGE SAMPLES INDICATED THE PROCESS SIGNIFICANTLY REDUCED PATHOGEN LEVELS BEYOND THAT ACHIEVED BY CONVENTIONAL ANAEROBIC DIGESTION PRACTICE. THE DUAL DIGESTION PROCESS PROVED ITSELF TO BE AN EFFECTIVE SLUDGE STABILIZATION PROCESS ACHIEVING AN OVERALL VOLATILE SOLIDS DESTRUCTION OF 42 PERCENT.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011888

PUBLICATION DATE: 84

TITLE: TECHNOLOGY ASSESSMENT OF AQUACULTURE SYSTEMS FOR MUNICIPAL WASTEWATER TREATMENT.

PERSONAL AUTHOR: HYDE, HENRY C.; AND OTHERS

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *AQUACULTURE; ANIMALS; COSTS; DESIGN; FACILITIES; FISH; LAND USE; HYACINTHS; PLANTS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RECOMMENDATIONS; *RESEARCH; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 131P. PRICE: $8.86

ABSTRACT: THIS PUBLICATION CONSIDERS THE APPLICABILITY AND TECHNICAL AND ECONOMIC FEASIBILITY OF USING AQUACULTURE SYSTEMS FOR MUNICIPAL WASTEWATER TREATMENT FACILITIES. UNDER MOST CONDITIONS THE COST OF AN AQUACULTURE SYSTEM IS LESS THAN OR EQUAL TO THE COST OF A CONVENTIONAL SYSTEM. DUE TO THE AMOUNT OF LAND REQUIRED, THE COST AND AVAILABILITY OF LAND ARE LIMITING FACTORS FOR USE IN URBAN SETTINGS. RECOMMENDATIONS FOR FUTURE RESEARCH ARE INCLUDED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011889

PUBLICATION DATE: 84

TITLE: SEWAGE SLUDGE INCINERATOR FUEL REDUCTION HARTFORD, CONNECTICUT.

PERSONAL AUTHOR: VEUDOUW, ALBERT J.; GILBERT, PAUL F.

DESCRIPTOR: *DEWATERING; *COSTS; *FUEL CONSUMPTION; *ECONOMICS; *FILTER PRESSES; *INCINERATORS; *MULTIPLE-HEARTH INCINERATORS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 54P. PRICE: $4.24

ABSTRACT: A FIELD DEMONSTRATION PROJECT WAS CONDUCTED TO REDUCE FUEL CONSUMPTION IN MUNICIPLE SLUDGE INCINERATORS BY USING A MORE FUEL-EFFICIENT OPERATING MODE. THE ANNUAL FUEL COST SAVING FROM DEWATERING AND IMPROVED INCINERATOR OPERATION AMOUNTED TO $1.3 MILLION. THE EXPERIENCE ALSO SHOWS THAT EVEN WHEN THE DEWATERING PROCESS HAS BEEN SUBSTANTIALLY IMPROVED, FURTHER EFFORTS TO IMPROVE THE INCINERATOR OPERATING MODE ARE VERY COST EFFECTIVE.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011890

PUBLICATION DATE: 84

TITLE: USE OF SEWAGE SLUDGE ON AGRICULTURAL AND DISTURBED LANDS.

DESCRIPTOR: *AGRICULTURE; *ENVIRONMENTAL EFFECTS; *LAND APPLICATION; *RISK ASSESSMENT; *RECOMMENDATIONS; *PUBLIC HEALTH; *RESEARCH REPORTS; *SEWAGE SLUDGE; *SLUDGE; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 249P. PRICE: $15.94

ABSTRACT: THIS REPORT PRESENTS RESULTS OF A CONTINUING LONG-TERM STUDY OF METHODS OF RECYCLING WASTEWATER SLUDGE ON LAND. IT CONTAINS INFORMATION ABOUT BENEFICIAL AND ADVERSE EFFECTS OF APPLYING SLUDGE ON VARIOUS KINDS OF SOIL AT VARIABLE RATES AND INDICATES MANAGEMENT NEEDED TO ACHIEVE THE GREATEST BENEFIT WITH A LOW DEGREE OF RISK TO THE ENVIRONMENT OR PUBLIC HEALTH.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011891

PUBLICATION DATE: 84

TITLE: SWIRL AND HELICAL BEND REGULATOR/CONCENTRATOR FOR STORM AND COMBINED SEWER OVERFLOW CONTROL.

PERSONAL AUTHOR: PISANO, WILLIAM C.; AND OTHERS

DESCRIPTOR: *FLOW REGULATORS; *HELICAL BEND FLOW REGULATOR; *SWIRL REGULATORS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *STORMWATER; *SURFACE RUNOFF; *URBAN RUNOFF; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 363P. PRICE: $22.78

ABSTRACT: THIS REPORT PRESENTS THE SUMMARY RESULTS OF A THREE YEAR DATA COLLECTION AND ANALYSIS EFFORT DESIGNED TO EVALUATE THE FEASIBILITY AND EFFICIENCY OF FLOW REGULATORS/CONCENTRATORS FOR CONTROL OF URBAN STORMWATER POLLUTION. THE USE OF THE SWIRL REGULATOR/CONCENTRATOR AND

HELICAL BEND REGULATOR FOR CONTROL OF BOTH SEPARATELY SEWERED URBAN STORMWATER AND COMBINED SEWER OVERFLOWS HAVE RESULTED IN REMOVAL EFFICIENCIES COMPARABLE TO THOSE ACHIEVED THROUGH THE USE OF CONVENTIONAL SETTLING TANKS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011892

PUBLICATION DATE: 84

TITLE: LONG-TERM USE OF SEWAGE SLUDGE ON AGRICULTURAL AND DISTURBED LANDS.

PERSONAL AUTHOR: HINESLY, T. D.; REDBORG, K. E.

DESCRIPTOR: *AGRICULTURE; *CORN; *ENVIRONMENTAL EFFECTS; *LAND APPLICATION; *RECOMMENDATIONS; *RESEARCH REPORTS; *SLUDGE; *SEWAGE SLUDGE; *STRIP MINING

DESCRIPTIVE NOTE: 87P. PRICE: $6.22

ABSTRACT: THIS REPORT PRESENTS RESULTS OF LONG TERM USE OF WASTEWATER SLUDGE ON LAND. STABILIZED SLUDGE WAS APPLIED ANNUALLY FOR 14 YEARS ON AGRICULTURAL AND STRIP MINED LANDS AT VARIOUS RATES AND WITH VARIOUS MANAGEMENT SCHEMES. THREE FIELD STUDIES ARE REPORTED: (1) RESPONSE OF CORN TO SEWAGE SLUDGE; (2) UPTAKE OF ZINC BY CORN; AND (3) EFFECTS OF HIGH SLUDGE APPLICATION RATES ON STRIP-MINE SPOIL CHARACTERISTICS AND THE RESPONSE OF PLANTS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011893

PUBLICATION DATE: 84

TITLE: SEWAGE SLUDGE VERSUS COMMERCIAL METHODS FOR RECLAIMING STRIP-MINE SOILS.

PERSONAL AUTHOR: ABRON-ROBINSON, LILIA A.; WEINBERGER, LEON W.

DESCRIPTOR: *COSTS; *ENVIRONMENTAL EFFECTS; *FEASIBILITY; *LAND DEVELOPMENT; *MINING; *PERFORMANCE EVALUATION; *RECLAMATION; *RESEARCH REPORTS; *STRIP MINING; *SEWAGE SLUDGE; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 110P. PRICE: $7.60

ABSTRACT: THIS REPORT WAS PREPARED TO ASSIST THOSE WHO ARE CONSIDERING OR MUST RECLAIM LAND WHICH WAS STRIP MINED. THE COST AND ENVIRONMENTAL EFFECTS OF USING SEWAGE SLUDGE OR COMMERCIAL PRODUCTS TO RECLAIM STRIP-MINED LAND ARE DOCUMENTED SO THAT AN INFORMED DECISION CAN BE MADE BETWEEN THE TWO RECLAMATION METHODS. THE STUDY DEMONSTRATED, BASED

ON AVAILABLE DATA, THAT COMMERCIAL METHODS AND SEWAGE SLUDGE CAN BE SUCCESSFULLY USED TO RECLAIM STRIP-MINED SOILS WITH NO ADVERSE ENVIRONMENTAL EFFECTS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011895

PUBLICATION DATE: 84

TITLE: TECHNOLOGY ASSESSMENT OF CARVER-GREENFIELD MUNICIPAL SLUDGE DRYING PROCESS.

PERSONAL AUTHOR: HYDE, HENRY C.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *CARVER-GREENFIELD PROCESS; *COSTS; *ECONOMICS; *PERFORMANCE EVALUATION; *TECHNOLOGY; *SLUDGE; *SLUDGE DEWATERING; *SLUDGE DRYING; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 76P. PRICE: $4.80

ABSTRACT: THE OBJECTIVE OF THIS REPORT WAS TO EVALUATE THE TECHNICAL AND ECONOMIC FEASIBILITY OF USE THE CARVER-GREENFIELD MUNICIPAL SLUDGE DRYING PROCESS FOR MUNICIPAL WASTEWATER TREATMENT FACILITIES. THE PROCESS APPEARS TO BE A COST-EFFECTIVE ENERGY EFFICIENT METHOD APPLICABLE TO THE WASTEWATER INDUSTRY.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011897

PUBLICATION DATE: 84

TITLE: TECHNICAL-ECONOMIC STUDY OF SEWAGE SLUDGE DISPOSAL ON DEDICATED LAND.

PERSONAL AUTHOR: ABRON-ROBINSON, LILIA A.; WEINBERGER, LEON W.

DESCRIPTOR: *AGRICULTURE; *COSTS; *ECONOMICS; *ENVIRONMENTAL IMPACTS; *LAND APPLICATION; *LAND USE; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SEWAGE SLUDGE; *SLUDGE; *TECHNOLOGY; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 125P. PRICE: $7.25

ABSTRACT: THIS REPORT DISCUSSES SOME OF THE TECHNICAL AND ECONOMIC FACTORS, AND ADVANTAGES AND DISADVANTAGES, IN DISPOSING OF SEWAGE SLUDGE ON DEDICATED LAND. THREE TYPES OF SLUDGE DISPOSAL ON DEDICATED LAND ARE PRESENTED: (A) SLUDGE APPLIED TO CROPS ACCORDING TO NUTRIENT REQUIREMENTS WITH CADMIUM APPLICATION RATES LIMITED BY U.S. EPA CRITERIA; (B) SLUDGE APPLICATION RATES EXCEEDING CROP NUTRIENT REQUIREMENTS AND WHERE ALLOWABLE ANNUAL CADMIUM LIMITATIONS

ARE EQUALLED OR EXCEEDED; AND (C) SLUDGE IS APPLIED AT RATES GREATLY EXCEEDING CROP NUTRIENT REQUIREMENTS, AND ALLOWABLE ANNUAL CADMIUM LIMITATIONS ARE ALSO EXCEEDED. TWO SLUDGE DISPOSAL DEDICATED LAND SITES ARE DISCUSSED FOR EACH OF THE THREE NUTRIENT AND CADMIUM CONDITIONS (TOTAL OF SIX DEDICATED SITES). MEASURABLE ENVIRONMENTAL CHANGES AT EACH SITE WERE EVALUATED USING AVAILABLE ENVIRONMENTAL DATA. THE ECONOMICS OF SLUDGE DISPOSAL ON DEDICATED LAND IN BOTH MONETARY AND NONMONETARY TERMS WERE ALSO STUDIED. LASTLY, THE ADVANTAGES, DISADVANTAGES AND OTHER FACTORS GOVERNING THE DISPOSAL OF SLUDGE ON DEDICATED SITES WERE EVALUATED. THE STUDY INDICATES THAT WELL MANAGED AND PROPERLY USED DEDICATED SLUDGE APPLICATION SITES ARE ENVIRONMENTALLY ACCEPTABLE EVEN AT HIGH SLUDGE APPLICATION RATES. COST ADVANTAGE BETWEEN THE THREE TYPES OF DEDICATED SITES ARE DIFFICULT TO DETERMINE BECAUSE COSTS ARE DICTATED BY LOCAL CONDITIONS, AND INSTITUTIONAL, SOCIAL, POLITICAL AND AESTHETIC FACTORS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011898

PUBLICATION DATE: 84

TITLE: ULTRAVIOLET DISINFECTION OF A SECONDARY EFFLUENT: CALCULATION AND MEASUREMENT OF DOSE AND EFFECT OF FILTRATION.

PERSONAL AUTHOR: JOHNSON, J. DONALD; QUALLS, ROBERT C.

DESCRIPTOR: *DISINFECTION; *EFFLUENTS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *ULTRAVIOLET RADIATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 125P. PRICE: $7.25

ABSTRACT: THE FIRST PHASE OF THIS STUDY INVOLVED A PILOT PLANT STUDY COMPARING: (1) TWO UTLTRAVIOLET DISINFECTION UNITS EMPLOYING DIFFERENT LAMP SPACING ('FILM DEPTH'), (2) THE EFFECTS OF MIXED MEDIA FILTRATION, AND (3) THE EFFECTS OF RANDOMLY VARYING WATER QUALITY PARAMETERS. EXPERIENCE FROM THE PILOT PLANT STUDY LED TO A SECOND LABORATORY EXPERIMENTAL PHASE INVOLVING: (1) VERIFICATION OF THE EFFECTS OF FILTRATION, (2) SEPARATION OF THE EFFECTS OF ABSORBED AND SCATTERED LIGHT AND ITS RELATION TO SPECTROPHOTONETRICALLY MEASURED ABSORBANCE, (3) EVALUATION OF A METHOD FOR CALCULATING DOSAGES, (4) METHODS FOR IN SITU MEASUREMENT OF UV DOSAGES, AND (5) EVALUATION OF THE ROLE OF FILM DEPTH ON EFFICIENCY OF DOSAGE. RESULTS OF THE RESEARCH ARE REPORTED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011899

PUBLICATION DATE: 84

TITLE: RECOMMENDED PRACTICE FOR FLOW MEASUREMENT IN WASTEWATER TREATMENT PLANTS WITH VENTURI TUBES AND VENTURI NOZZLES.

PERSONAL AUTHOR: KULIN, GERSHON

DESCRIPTOR: *CALIBRATION; *EQUIPMENT; *FLOW MEASUREMENT; *INSTRUMENTS; *MONITORING; *OPERATIONS (WASTEWATER); *VENTURI NOZZLES; *VENTURI TUBES; *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 63P. PRICE: $4.15

ABSTRACT: THIS DOCUMENT, FIRST IN A SERIES, REPRESENTS AN EFFORT TO PROVIDE IMPROVED GUIDELINES FOR THE SELECTION, INSTALLATION, CALIBRATION, AND MAINTENANCE OF INSTRUMENTS USED FOR MONITORING AND PROCESS CONTROL IN WASTEWATER TREATMENT PLANTS. VENTURI TUBES AND VENTURI NOZZLES ARE SUITABLE FOR IN-PLANT FLOW MEASUREMENT OF RAW INFLUENT, TREATED EFFLUENT, RETURN ACTIVATED SLUDGE, CERTAIN DIGESTED SLUDGES, AND FOR AIR AND GAS FLOWS. HOWEVER, THEY ARE NOT GENERALLY RECOMMENDED FOR MEASUREMENT OF RAW PRIMARY SLUDGE. THE CLASSICAL VENTURI TUBE AND THE STANDARD VENTURI NOZZLE HAVE VERY SPECIFIC REQUIREMENTS FOR CONSTRUCTION AND INSTALLATION, WHICH ARE DESCRIBED IN SECTIONS 4, 5, 6 AND 7 OF THIS DOCUMENT. THERE ARE ALSO SPECIFIC REQUIREMENTS ON THE SECONDARY SYSTEM WHICH ARE DESCRIBED IN SECTION 8. UNCERTAINTIES IN MEASUREMENT ARE CONSIDERED AND METHODS OF ESTIMATING THE UNCERTAINTY OF THE CALIBRATION MEASUREMENTS ARE GIVEN.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011900

PUBLICATION DATE: 84

TITLE: RECOMMENDED PRACTICE FOR THE USE OF PARSHALL FLUMES AND PALMER-BOWLUS FLUMES IN WASTEWATER TREATMENT PLANTS.

PERSONAL AUTHOR: KULIN, GERSHON

DESCRIPTOR: *EQUIPMENT; *FACILITIES; *FLUMES; *FLOW MEASUREMENT; *INSTRUMENTATION; *MEASUREMENT; *PARSHALL FLUMES; *PALMER-BOWLUS FLUMES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 64P. PRICE: $4.20

ABSTRACT: PARSHALL AND PALMER-BOWLUS FLUMES ARE SUITABLE FOR IN-PLANT OPEN CHANNEL FLOW MEASUREMENT OF RAW WASTEWATER AND TREATED EFFLUENT AS WELL AS WASTEWATER IN INTERMEDIATE STAGES OF TREATMENT. PARSHALL FLUMES ARE EMPIRICAL DEVICES WHICH MUST BE FABRICATED AND INSTALLED ACCORDING TO SPECIFIC REQUIREMENTS IN ORDER TO YIELD THE 'STANDARD' VALUES OF DISCHARGE. THE DISCHARGE OF PALMER-BOWLUS FLUMES CAN BE DETERMINED ANALYTICALLY WITHIN SPECIFIED ERROR LIMITS

PROVIDED THAT DESCRIBED CRITERIA FOR CONSTRUCTION AND INSTALLATION ARE MET. THE ACCURACY OF A FLUME-BASED MEASURING SYSTEM DEPENDS UPON A COMBINATION OF THE ACCURACIES OF THE FLUME ITSELF AND THE SECONDARY INSTRUMENTATION. THE BASIC UNCERTAINTY OF PROPERLY CONSTRUCTED AND INSTALLED FLUMES IS ABOUT +/- 3 PERCENT. IF THIS UNCERTAINTY IS UNACCEPTABLE TO THE USER OR IF THERE ARE FABRICATION AND INSTALLATION CONDITIONS, AS DESCRIBED IN THE REPORT, FOR WHICH ADDITIONAL ERRORS CANNOT BE ESTIMATED, A FIELD CALIBRATION OF THE FLUME MUST BE MADE. SUGGESTED METHODS OF CALIBRATING AND MONITORING THE PERFORMANCE OF THE FLUMES AND SECONDARY INSTRUMENTS ARE DESCRIBED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011901

PUBLICATION DATE: 84

TITLE: RECOMMENDED PRACTICE FOR THE USE OF ELECTROMAGNETIC FLOWMETERS IN WASTEWATER TREATMENT PLANTS.

PERSONAL AUTHOR: KULIN, GERSHON

DESCRIPTOR: *ELECTROMAGNETIC FLOWMETERS; *EQUIPMENT; *FLOW MEASUREMENT; *FLOWMETERS; *INSTRUMENTATION; *MEASUREMENT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RECOMMENDATIONS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 33P. PRICE: $2.90

ABSTRACT: THIS PUBLICATION PROVIDES SUGGESTIONS AND METHODS FOR THE USE OF ELECTROMAGNETIC FLOWMETERS IN WASTEWATER TREATMENT PLANTS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011902

PUBLICATION DATE: 84

TITLE: 1984 BIBLIOGRAPHY OF SMALL WASTEWATER FLOWS.

PERSONAL AUTHOR: DIX, STEPHEN, P., ED.; KAROLCHIK, TRINA L., ED.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *ONSITE DISPOSAL; *PRESSURE SEWERS; *RURAL AREAS; *SEPTIC TANKS; *SMALL SYSTEMS; *VACUUM SEWERS; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 368P. PRICE: $19.40

ABSTRACT: THIS PUBLICATION CONTAINS ABSTRACTS OF LITERATURE RELATED TO INNOVATIVE AND ALTERNATIVE WASTEWATER TREATMENT SYSTEMS FOR SMALL COMMUNITIES, THE SPARSELY POPULATED AREAS OF LARGER COMMUNITIES, AND INDIVIDUAL, ON-SITE SYSTEMS. THIS

NEW BIBLIOGRAPHY VOLUME SUPPLEMENTS THE FIRST VOLUME, THE 1979 BIBLIOGRAPHY OF SMALL WASTEWATER FLOWS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011990

PUBLICATION DATE: 84

TITLE: INTERNAL CONTROL REVIEW REPORT ON THE MUNICIPAL WASTEWATER TREATMENT WORKS CONSTRUCTION GRANTS PROGRAM.

DESCRIPTOR: BIDDING; *CONSTRUCTION GRANTS PROGRAM; COSTS; *FACILITIES; *INTERNAL CONTROL; *MAINTENANCE; *MANAGEMENT; *OPERATIONS (WASTEWATER); *RECOMMENDATIONS; STATE PRIORITIES; *USEPA; VALUE ENGINEERING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 166P. PRICE: $8.00

ABSTRACT: THIS REVIEW REPORT IS BASED UPON PREVIOUS MANAGEMENT EFFORTS. IT IS DIRECTED TO AREAS IDENTIFIED UNDER THE ACT AS HIGHLY VULNERABLE, WITH THE GREATEST PRIORITY FOR ATTENTION AND ASSURING THAT FUNDS, PROPERTY, AND OTHER ASSETS ARE USED APPROPRIATELY. THIS REPORT PROVIDES TEAM FINDINGS, MANAGEMENT DECISIONS, AND ACTION PLANS. THE REVIEW FOCUSES ON STATE AND EPA MANAGEMENT. SECTIONS ARE INCLUDED ON (1) STATE PRIORITY SYSTEMS, (2) COST EFFECTIVENESS AND FACILITY SIZING, (3) FOCAL FINANCIAL CAPABILITY, (4) VALUE ENGINEERING ANALYSIS, (5) SPECIFYING AND BIDDING, (6) CLAIMS AND CHANGE ORDERS MANAGEMENT, AND (7) OPERATION AND MAINTENANCE.

AVAILABILITY: ENVIRONMENTAL QUALITY INFORMATION REFERENCE CENTER, 1200 CHAMBERS RD., ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW011994

PUBLICATION DATE: 85

TITLE: HOW TO AUDIT YOUR MAINTENANCE DEPARTMENT AND IDENTIFY PRODUCTIVITY IMPROVEMENT.

DESCRIPTOR: *CHECKLISTS; COSTS; EQUIPMENT; FACILITIES; *MAINTENANCE; *MANAGEMENT; PLANNING; PRODUCTIVITY; STAFFING

DESCRIPTIVE NOTE: 56P.

ABSTRACT: THIS REPORT PROVIDES A CHECK LIST TO HELP IDENTIFY CURRENT LEVELS OF MAINTENANCE PRODUCTIVITY AND AREAS THAT REQUIRE IMPROVEMENT. A GOOD MAINTENANCE MANAGEMENT PROGRAM DOES THE BEST JOB POSSIBLE IN THE LEAST AMOUNT OF TIME FOR THE LOWEST COST.

AVAILABILITY: ENGINEER'S DIGEST, V13 N3

IRIS ACCESSION NUMBER: EW011995

PUBLICATION DATE: 83

TITLE: MAINTENANCE SYSTEM IMPROVES PLANT'S PRODUCTIVITY 3890.

DESCRIPTOR: *COMPUTER APPLICATIONS; *MAINTENANCE; *MANAGEMENT; *MANUFACTURERS; *PLANNING; *PRODUCTIVITY

DESCRIPTIVE NOTE: 74P.

ABSTRACT: DESCRIBED IS A MAINTENANCE MANAGEMENT SYSTEM THAT IMPROVED A PLANT'S PRODUCTIVITY BY 38%. THE MANUFACTURER ADDED ON-LINE COMPUTER SUPPORT TO ITS MAINTENANCE MANAGEMENT SYSTEM.

AVAILABILITY: ENGINEER'S DIGEST; V13 N3

IRIS ACCESSION NUMBER: EW012034

PUBLICATION DATE: 83

TITLE: LABS AND LAND APPLICATION.

PERSONAL AUTHOR: CAHALL, KATHLEEN M.; HERNANDEZ, LYDIA E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; COSTS; ENVIRONMENT; *LAND APPLICATION; *MANAGEMENT; *PERFORMANCE EVALUATION; *SLUDGE; *SOIL; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 10-17P.

ABSTRACT: THIS ARTICLE DESCRIBES HOW A WASTEWATER LABORATORY CAN MEASURE THE IMPACT OF SLUDGE APPLICATION TO LAND.

AVAILABILITY: OPERATIONS FORUM; V2 N1

IRIS ACCESSION NUMBER: EW012035

PUBLICATION DATE: 83

TITLE: DATA REPORTING FUNDAMENTALS.

PERSONAL AUTHOR: DHALIWAL, BHUPINDER S.; AND OTHERS

DESCRIPTOR: ANALYTICAL TECHNIQUES; *DATA COLLECTION; *DATA REPORTING; BENCH SHEETS; *MANAGEMENT; *OPERATIONS (WASTEWATER); *RECORDKEEPING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 13-21P.

ABSTRACT: DESCRIBED ARE THE FUNDAMENTALS FOR DATA REPORTING. THE USE OF BENCH SHEETS IS STRESSED.

AVAILABILITY: OPERATIONS FORUM; V2 N1

IRIS ACCESSION NUMBER: EW012056

PUBLICATION DATE: 85

TITLE: FROM SCRIPT TO SCREEN BY COMPUTER FOR INTERACTIVE VIDEODISCS.

PERSONAL AUTHOR: SMITH, RICHARD C.

DESCRIPTOR: *AUDIOVISUAL AIDS; *AUTHORING SYSTEMS; *COMPUTER APPLICATIONS; *COMPUTER SOFTWARE; *CURRICULUM DEVELOPMENT; *INSTRUCTIONAL MATERIALS; *SCRIPTCODER; *VIDEODISCS

DESCRIPTIVE NOTE: 31-33P.

ABSTRACT: DESCRIBED IS A DELIVERY SYSTEM CALLED "SCRIPTCODER". SCRIPTCODER IS A SOFTWARE SYSTEM DRIVEN BY DISKETTE TEXTFILES. THESE FILES CONTAIN ALL THE INFORMATION NEEDED TO BRING THE INSTRUCTIONAL COMPONENTS SPECIFIED ON A PAPER SCRIPT TO THE TRAINEE'S MONITOR SCREEN. EXAMPLES OF HOW THE SYSTEM HAS BEEN USED ARE INCLUDED.

AVAILABILITY: E. I. TV; V17 N1

IRIS ACCESSION NUMBER: EW012057

PUBLICATION DATE: 85

TITLE: A PERSONAL COMPUTER PROGRAM FOR STORYBOARDIND.

PERSONAL AUTHOR: HARLOW, ROBERT B.

DESCRIPTOR: *AUTHORING SYSTEMS; *COMPUTER APPLICATIONS; *COMPUTER SOFTWARE; *CURRICULUM DEVELOPMENT; *IBM PC; *INSTRUCTIONAL MATERIALS; *STORYBOARDING; *VIDEODISCS

DESCRIPTIVE NOTE: 34, 36P.

ABSTRACT: DESCRIBED IS A PERSONAL COMPUTER PROGRAM FOR STORYBOARDING. THE PROGRAM IS DESIGNED FOR USE WITH IBM PC AND PC COMPATIBLES.

AVAILABILITY: E. I. TV; V17 N1

IRIS ACCESSION NUMBER: EW012058

PUBLICATION DATE: 85

TITLE: FROM INTERACTIVE TAPE TO DISC WITH INSIGHT.

PERSONAL AUTHOR: WHITNEY, NELSON S.

DESCRIPTOR: *AUTHORING SYSTEMS; *AUDIOVISUAL AIDS; *COMPUTER APPLICATIONS; *COMPUTER SOFTWARE; *CURRICULUM DEVELOPMENT; *INSTRUCTIONAL MATERIALS; *INSIGHT; *VIDEODISCS

DESCRIPTIVE NOTE: 37-38P.

ABSTRACT: INSIGHT IS A SOFTWARE PACKAGE THAT LETS YOU EDIT

AND TEST YOUR PROGRAM ON TAPE BEFORE YOU MAKE THE DISC. THE ARTICLE PROVIDES EXAMPLES OF HOW THE SOFTWARE CAN BE USED.

AVAILABILITY: E. I. TV; V17 N1

IRIS ACCESSION NUMBER: EW012059

PUBLICATION DATE: 85

TITLE: WHY TO USE LARGER COMPUTER WITH SMALLER ONES FOR VIDEODISC DESIGN.

PERSONAL AUTHOR: RAAB, FREDRIC J.

DESCRIPTOR: *AUTHORING SYSTEMS; *COMPUTER APPLICATIONS; *COMPUTER SOFTWARE; *CURRICULUM DEVELOPMENT; *DEC; *INSTRUCTIONAL MATERIALS; *IVIS; *VIDEODISCS

DESCRIPTIVE NOTE: 40-44P.

ABSTRACT: DESCRIBED IS THE USE OF THE IVIS SYSTEM, THE INTERACTIVE VIDEODISC SYSTEM DEVELOPED BY DIGITAL EQUIPMENT CORPORATION (DEC). THE IVIS SYSTEM REQUIRES USERS TO HAVE A SUBSTANTIALLY LARGER COMPUTER SYSTEM, VAX, ALSO MADE BY DEC.

AVAILABILITY: E. I. TV; V17 N1

IRIS ACCESSION NUMBER: EW012060

PUBLICATION DATE: 85

TITLE: VIDEO INTERFACES FOR PERSONAL COMPUTERS.

PERSONAL AUTHOR: KALOWSKI, NATHAN

DESCRIPTOR: *COMPUTERS; *COMPUTER APPLICATIONS; *COMPUTER EQUIPMENT; *COMPUTER INTERFACES; *COMPUTER LANGUAGES; *CURRICULUM DEVELOPMENT; *EQUIPMENT NEEDS; *VIDEODISCS

DESCRIPTIVE NOTE: 43, 48P.

ABSTRACT: LEVEL THREE VIDEODISC SYSTEMS REQUIRE A COMPUTER, A LASER DISC PLAYER, A VIDEO MONITOR, ONE OR MORE INPUT/OUTPUT DEVICES, AND A COMPUTER/PLAYER INTERFACE/CONTROLLER. THE PURPOSE OF THIS ARTICLE IS TO EXPLORE THE CAPABILITIES OF THESE INTERFACES.

AVAILABILITY: E. I. TV; V17 N1

IRIS ACCESSION NUMBER: EW012062

PUBLICATION DATE: 83

TITLE: WASTEWATER MANAGEMENT DISTRICTS. AN ALTERNATIVE FOR SEWAGE DISPOSAL IN SMALL COMMUNITIES.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *CANADA; *COSTS; *DESIGN; *MANAGEMENT; *NOVA SCOTIA; *OPERATIONS (WASTEWATER); *PLANNING; *RURAL AREAS; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 32P.

ABSTRACT: DEVELOPMENTS IN NOVA SCOTIA HAVE MADE IT BOTH NECESSARY AND POSSIBLE FOR MUNICIPAL GOVERNMENTS TO SEEK AND DEVELOP FLEXIBLE ALTERNATIVES TO CONVENTIONAL CENTRAL SEWERAGE SYSTEMS. THIS DOCUMENT WILL BE OF BENEFIT TO THOSE WISHING TO DO SO. SECTIONS ARE INCLUDED ON THE WASTEWATER MANAGEMENT DISTRICT CONCEPT, TECHNOLOGY, COST IMPLICATIONS, AND A PILOT PROJECT.

AVAILABILITY: DEPT. MUNICIPAL AFFAIRS, LIBRARY, P.O. BOX 216, HALIFAX, NOVA SCOTIA B3J 2M4 CANADA

IRIS ACCESSION NUMBER: EW012063

PUBLICATION DATE: 84

TITLE: AQUIRE: AQUATIC INFORMATION RETRIEVAL TOXICITY DATA BASE: PROJECT DESCRIPTION, GUIDELINES, AND PROCEDURES.

PERSONAL AUTHOR: RUSSO, R. C.; PILLI, A.

DESCRIPTOR: *AQUIRE; *DATABASES; *AQUATIC ENVIRONMENTS; *GUIDELINES; *MANUALS; *INFORMATION RETRIEVAL; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 186P. PRICE CODE: PC A09/MF A01. ORDER NO.: PB85-116333/WEP

ABSTRACT: THIS MANUAL PROVIDES GUIDELINES FOR THE AQUIRE DATA BASE AND PROCEDURES FOR ENCODING DATA FROM PUBLISHED SCIENTIFIC PAPERS ON AQUATIC TOXICITY. THESE COMPLETE INSTRUCTIONS ARE INTENDED PRIMARILY FOR THOSE ENTRING DATA INTO AQUIRE, TO INSURE UNIFORMITY OF DATA INTERPRETATION AND ENTRY. THE MANUAL WILL ALSO BE USED FOR AQUIRE USERS, TO INSURE PROPER UNDERSTANDING OF THE ENCODED DATA. THE BASIC GUIDELINES AND PROCEDURES IN THIS MANUAL WERE INITIALLY ESTABLISHED IN JUNE 1981 FOR THE AQUIRE DATA BASE. THEY HAVE UNDERGONE NUMEROUS ADDITIONS AND REFINEMENTS TO ACCOMMODATE INFORMATION ENCOUNTERED WHILE REVIEWING PAPERS AS THE DATA BASE DEVELOPED AND EXPANDED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012067

PUBLICATION DATE: 84

TITLE: ADVANCED WASTE TREATMENT PERFORMANCE EVALUATION SUMMARY REPORT.

DESCRIPTOR: *ADVANCED WASTEWATER TREATMENT; *COMPLIANCE; *COSTS; DESIGN; EQUIPMENT; FACILITIES; MAINTENANCE; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SURVEYS; *TECHNOLOGY; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 73P. PRICE: $3.00

ABSTRACT: THE PURPOSE OF THIS STUDY WAS TO EVALUATE THE EFFECTIVENESS OF VARIOUS TECHNOLOGIES THAT HAVE BEEN USED TO ACHIEVE ADVANCED WASTEWATER TREATMENT (AWT) OBJECTIVES IN MUNICIPAL PROJECTS. OF THE MORE THAN 20 AWT TECHNOLOGIES EXAMINED NINE WERE IDENTIFIED AS HAVING PROBLEMS THAT NEED TO BE ADDRESSED. SIX PROCESSES EXHIBITED COMMON PROBLEMS THAT CAN BE MITIGATED THROUGH RETROFIT OR OPERATIONAL MODIFICATIONS. IN ADDITION TO TECHNICAL PROBLEMS OTHER INDIRECT PROBLEMS WERE IDENTIFIED. REPORTS ON VARIOUS TECHNOLOGIES ARE PRESENTED.

AVAILABILITY: ENVIRONMENTAL QUALITY INFORMATION REFERENCE CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012108

PUBLICATION DATE: 84

TITLE: HANDBOOK OF ADVANCED TREATMENT REVIEW ISSUES.

DESCRIPTOR: *ADVANCED WASTEWATER TREATMENT; *AMMONIA; *CHLORINE; *DISSOLVED OXYGEN; COSTS; DESIGN; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 114P. PRICE: $7.84

ABSTRACT: THIS HANDBOOK IDENTIFIES THE MOST SIGNIFICANT ISSUES ENCOUNTERED IN THE REVIEW OF PROPOSED ADVANCED TREATMENT (AT) PROJECTS BY THE ENVIRONMENTAL PROTECTION AGENCY, AND DESCRIBES THE PROCEDURES AND INFORMATION USED TO EVALUATE EACH ISSUE AS A BASIS FOR MAKING FEDERAL CONSTRUCTION GRANT FUNDING DECISIONS. THE INFORMATION CONTAINED IN THIS DOCUMENT IS INTENDED TO ASSIST STATES AND REGIONS IN THE PLANNING AND REVIEW OF AT PROJECTS.

AVAILABILITY: ENVIRONMENTAL QUALITY INFORMATION REFERENCE CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012137

PUBLICATION DATE: 85

TITLE: TROUBLESHOOTING REDUCED PRESSURE PRINCIPLE DEVICES.

DESCRIPTOR: *BACKFLOW PREVENTION; *EQUIPMENT; *MAINTENANCE; *REDUCED PRESSURE DEVICES; *TROUBLESHOOTING; *WATER SUPPLY; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 1, 4P.

ABSTRACT: THIS ARTICLE PRESENTS TROUBLESHOOTING ADVICE FOR REDUCED PRESSURE PRINCIPLE DEVICES. THE TROUBLESHOOTING SUGGESTIONS ARE SPECIFIC AND PRACTICAL.

AVAILABILITY: BACKFLOW PREVENTION; V2 N3

IRIS ACCESSION NUMBER: EW012195

PUBLICATION DATE: 84

TITLE: "MAKING THE LINKS": GUIDELINES FOR HYGIENE EDUCATION IN COMMUNITY WATER SUPPLY AND SANITATION.

PERSONAL AUTHOR: BOOT, MARIEKE T.

DESCRIPTOR: *DEVELOPING COUNTRIES; *DISEASES; *HYGIENE; *INSTRUCTIONAL MATERIALS; *PUBLIC HEALTH; *SANITATION; *WATER; *WASTE DISPOSAL; *WASTE TREATMENT; *WATER TREATMENT; *WATER SUPPLY

DESCRIPTIVE NOTE: 83P.

ABSTRACT: THE OBJECTIVES OF THESE GUIDELINES ARE TO PRESENT A BASIC UNDERSTANDING OF: (1) PROMOTION OF HEALTH IN THE COMMUNITY THROUGH PARTICIPATION; (2) REDUCTION OF WATER AND SANITATION RELATED DISEASES; (3) TRANSMISSION ROUTES OF WATER AND SANITATION RELATED DISEASES; AND (4) HYGIENE EDUCATION AND AUDIO-VISUAL AIDS. THE GUIDELINES ARE PRIMARILY INTENDED FOR COMMUNITY HYGIENE PROMOTORS AND OTHERS INVOLVED WITH PUBLIC STANDPOST WATER SUPPLIES PROJECT IN THE PARTICIPATING COUNTRIES. SECTIONS INCLUDE (1) PROMOTION OF HEALTH IN THE COMMUNITY, (2) PREVENTION OF WATER AND SANITATION RELATED DISEASES, (3) WATER AND SANITATION RELATED DISEASES, (4) HYGIENE EDUCATION AND AUDIO-VISUAL AIDS, AND (5) APPENDICES.

AVAILABILITY: INTERNATIONAL REFERENCE CENTER FOR COMMUNITY WATER SUPPLY AND SANITATION, P.O. BOX 5500, 2280 HM RIJSWIJK (THE HAGUE), NETHERLANDS

IRIS ACCESSION NUMBER: EW012198

PUBLICATION DATE: 84

TITLE: INCINERATION OF HAZARDOUS WASTES AT SEA. HEARING BEFORE A SUBCOMMITTEE ON THE COMMITTEE ON GOVERNMENT OPERATIONS, HOUSE OF REPRESE

DESCRIPTOR: *CHEMICALS; *COMMITTEE ON GOVERNMENT OPERATIONS; *CONGRESSIONAL HEARINGS; *ENVIRONMENT; *HAZARDOUS MATERIALS; *OCEANOGRAPHY; *POLLUTION CONTROL; *TECHNOLOGY; *WASTE DISPOSAL; *WATER POLLUTION CONTROL; *USEPA

DESCRIPTIVE NOTE: 347P.

ABSTRACT: THIS PUBLICATION REPORTS THE HEARING ON INCINERATION OF HAZARDOUS WASTES AT SEA BEFORE A SUBCOMMITTEE OF THE COMMITTEE ON GOVERNMENT OPERATIONS (U.S. HOUSE OF REPRESENTATIVES) ON JULY 12, 1984. ALSO INCLUDED ARE LETTERS, STATEMENTS, AND OTHER PRINTED MATERIALS SUBMITTED FOR THE COMMITTEE.

AVAILABILITY: U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC

IRIS ACCESSION NUMBER: EW012199

PUBLICATION DATE: 82

TITLE: A REVIEW OF THE POLLUTION ABATEMENT PROGRAMS RELATING TO THE PETROLEUM REFINERY INDUSTRY IN THE GREAT LAKES BASIN.

DESCRIPTOR: *CANADA; COMPLIANCE; DISCHARGE TRENDS; *GREAT LAKES; MONITORING; OIL SPILLS; *POLLUTION CONTROL; *PETROLEUM INDUSTRY; REPORTS; REGULATIONS; SOLID WASTE DISPOSAL; *UNITED STATES; *WATER POLLUTION CONTROL; *TRENDS

DESCRIPTIVE NOTE: 144P.

ABSTRACT: THIS REPORT ADDRESSES THE 15 REFINERIES DISCHARGING DIRECTLY TO THE GREAT LAKE BASIN. THE REPORT DOES NOT EVALUATE THE REFINERIES DISCHARGING TO MUNICIPAL TREATMENT SYSTEMS, OTHER THAN TO IDENTIFY THEIR PRETREATMENT REQUIREMENTS. THE REPORT DESCRIBES THE FINDINGS OF THE TASK FORCE REGARDING EFFLUENT QUALITY IMPROVEMENT, ANALYTICAL PROTOCOLS, TRENDS OF POLLUTANT LOADING, AND COMPLIANCE WITH JURISDICTIONAL EFFLUENT LIMITATIONS. THE TASK FORCE CONCLUDES THAT SINCE 1976 THERE HAS BEEN A SIGNIFICANT IMPROVEMENT IN THE QUALITY OF THE WASTEWATER BEING DISCHARGED FROM PETROLEUM REFINERIES TO THE GREAT LAKES BASIN.

AVAILABILITY: INTERNATIONAL JOINT COMMISSION, P.O. BOX 32869, DETROIT, MI 48232

IRIS ACCESSION NUMBER: EW012200

PUBLICATION DATE: 74

TITLE: PROCESS DESIGN MANUAL FOR SULFIDE CONTROL IN SANITARY SEWERAGE SYSTEMS.

DESCRIPTOR: *CONSTRUCTION; *DESIGN; *HYDROGEN SULFIDE; *MANUALS; *OPERATIONS (WASTEWATER); *SEWERS; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 136P.

ABSTRACT: THE PURPOSE OF THIS MANUAL WAS TO PROVIDE THE ENGINEERING COMMUNITY AND RELATED INDUSTRY A SOURCE OF INFORMATION FOR USE IN THE CONTROL OF CORROSION AND NOXIOUS CONDITIONS RESULTING FROM HYDROGEN SULFIDE IN EXISTING SEWERAGE SYSTEMS, AND IN THE DEVELOPMENT OF DESIGNS FOR NEW SYSTEMS SO AS TO KEEP THEM FREE FROM THESE PROBLEMS. MUCH OF THE INFORMATION PRESENTED IS BASED ON RESEARCH SPONSORED BY USEPA. SECTIONS ARE INCLUDED ON (1) CHARACTERISTICS AND PROPERTIES OF HYDROGEN SULFIDE, (2) THE OCCURRENCE AND EFFECTS OF SULFIDE IN SANITARY SEWERS, (3) INVESTIGATIONS OF EXISTING SYSTEMS, (4) CONTROL OF SULFIDE IN EXISTING SYSTEMS, AND (5) DESIGNING TO AVOID SULFIDE PROBLEMS.

AVAILABILITY: TECHNOLOGY TRANSFER, USEPA, 26 WEST ST. CLAIR, CINCINNATI, Od 45268

IRIS ACCESSION NUMBER: EW012203

TITLE: HANDBOOK OF TOXICITY OF PESTICIDES TO WILDLIFE.

DESCRIPTOR: *CHEMICALS; *ENVIRONMENTAL EFFECTS; *HANDBOOKS; *PESTICIDES; *POLLUTION; *RESEARCH REPORTS; *TOXIC SUBSTANCES; *WILDLIFE

DESCRIPTIVE NOTE: ORDER NO.: PB85-116267/FAB; PRICE: $11.50

ABSTRACT: NEARLY 200 DIFFERENT CHEMICALS OR FORMULATIONS, PLUS 15 OTHER ENVIRONMENTAL POLLUTANTS, WERE TESTED ON ONE OR MORE OF SOME 30 DIFFERENT SPECIES IN COMPILING THIS EDITION. TESTS WERE CONDUCTED ON TWO OR MORE COMMON, WIDELY DISTRIBUTED SPECIES OF WILDLIFE, WHENEVER POSSIBLE, USUALLY INCLUDING A BIRD; I.E. RING-NECK PHEASANT OR NORTHERN BOBWHITE, AND ANOTHER SPECIES. TO AID COMPARABILITY OF DATA NEARLY ALL PESTICIDES WERE ALSO TESTED AGAINST A SINGLE SPECIES--THE MALLARD DUCK. THE PESTICIDES WERE TESTED FOR BOTH IMMEDIATE AND LONG TERM (30 DAY) EFFECT AND WERE REPRESENTATIVE OF COMMON FAMILIES OF CHEMICALS USED IN THOUSANDS OF FORMULATIONS. BOTH ORAL AND PERCUTANEOUS EFFECTS WERE TESTED AND ACUTE TOXICITY DATA AND A LIST OF THE CLINICAL SIGNS OF INTOXICATIONS ARE INCLUDED. THE HANDBOOK GIVES FISH AND WILDLIFE RESOURCE MANAGERS A CONVENIENT, RELIABLE MEANS FOR ASSESSING POTENTIAL CONTAMINANT THREATS TO WILDLIFE RESOURCES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012208

PUBLICATION DATE: 85

TITLE: RECOMMENDED PRACTICES FOR ON-LINE MEASUREMENT OF RESIDUAL CHLORINE IN WASTEWATERS.

PERSONAL AUTHOR: KULIN, G.

DESCRIPTOR: ANALYTICAL TECHNIQUES; *CHLORINE; *DISINFECTION; *EQUIPMENT; *MAINTENANCE; *MEASUREMENT; *MONITORING; *OPERATIONS (WASTEWATER); *RESIDUAL CHLORINE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 31P. PRICE CODE: PC A03/MF A01. ORDER NO.: PB85-147478/WEP

ABSTRACT: THIS DOCUMENT PROVIDES USERS WITH INFORMATION THAT ASSISTS THEM IN SPECIFYING, INSTALLING, CALIBRATING, MAINTAINING AND MONITORING THE SUBSEQUENT PERFORMANCE OF ON-LINE RESIDUAL CHLORINE ANALYZERS IN WASTEWATER TREATMENT PLANTS. AN ON-LINE RESIDUAL CHLORINE ANALYZER MUST HAVE, AMONG OTHER CHARACTERISTICS: CAPABILITY FOR CONTINUOUS OPERATION; A SAMPLING SYSTEM THAT ASSURES A REPRESENTATIVE SAMPLE WITH THE PROPER CONTACT TIME; RANGE OF FROM 0-1 TO 0-10 MG/L OF CHLORINE RESIDUAL DEPENDING UPON THE APPLICATION; ACCURACY AND PRECISION WITHIN 3 PERCENT AND 1 PERCENT OF RANGE, RESPECTIVELY; RESPONSE TIME LESS THAN THREE MINUTES; AND ON-SITE READOUT AND OUTPUT CAPABILITY FOR TRANSMISSION TO A CONTROLLER AND/OR RECORDER. CALIBRATIONS SHOULD BE

BASED ON AMPEROMETRIC BACK TITRATION AND SHOULD BE PERFORMED AT FREQUENCIES THAT ARE BASED ON DOCUMENTATION OBTAINED DURING STARTUP. METHODS FOR DEVELOPING THIS INFORMATION AND OTHER PROCEDURES FOR MEASUREMENT ASSURANCE ARE DISCUSSED. RECOMMENDED MAINTENANCE GUIDELINES ARE GIVEN.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012211

PUBLICATION DATE: 83

TITLE: REVIEW OF HAZARDOUS WASTE DISPOSAL PRACTICES AT FEDERAL FACILITIES. HEARING BEFORE A SUBCOMMITTEE OF THE COMMITTEE ON GOVERNMENT O

DESCRIPTOR: *COMPLIANCE; *COMMITTEE ON GOVERNMENT OPERATIONS; *CONGRESSIONAL HEARINGS; *FEDERAL FACILITIES; *HAZARDOUS WASTES; *DEPARTMENT OF DEFENSE; *ENVIRONMENT; *MONITORING; *POLICIES; *PERFORMANCE EVALUATIONS; *WASTE DISPOSAL; *USEPA

DESCRIPTIVE NOTE: 378P.

ABSTRACT: THIS PUBLICATION CONTAINS TESTIMONY PROVIDED ON THE REVIEW OF HAZARDOUS WASTE DISPOSAL PRACTICES AT FEDERAL FACILITIES BEFORE A SUBCOMMITTEE OF THE COMMITTEE ON GOVERNMENT OPERATIONS (U.S. HOUSE OF REPRESENTATIVES) ON AUG. 15, 1983. ALSO INCLUDED ARE LETTERS, STATEMENTS, AND OTHER PRINT MATERIALS PROVIDED FOR THE HEARING.

AVAILABILITY: U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC

IRIS ACCESSION NUMBER: EW012212

PUBLICATION DATE: 84

TITLE: ENVIRONMENTAL MONITORING IMPROVEMENT ACT. HEARING BEFORE THE SUBCOMMITTEE ON NATURAL RESOURCES, AGRICULTURE RESEARCH AND ENVIRONME

DESCRIPTOR: *DATABASES; *COMMITTEE ON SCIENCE AND TECHNOLOGY; *CONGRESSIONAL HEARINGS; *ENVIRONMENTAL MONITORING IMPROVEMENT ACT; *ENVIRONMENT; *MONITORING; *PLANNING; *POLICIES; *POLICY DEVELOPMENT; *USEPA

DESCRIPTIVE NOTE: 192P.

ABSTRACT: THIS PUBLICATION CONTAINS TESTIMONY OF WITNESSES BEFORE THE COMMITTEE ON SCIENCE AND TECHNOLOGY (U.S. HOUSE OF REPRESENTATIVES) ON THE ENVIRONMENTAL MONITORING IMPROVEMENT ACT ON MARCH 28, 1984. ALSO INCLUDED ARE COPIES OF THE DRAFT BILL, WRITTEN COMMENTS, AND EPA STATEMENTS.

AVAILABILITY: U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC

IRIS ACCESSION NUMBER: EW012213

PUBLICATION DATE: 85

TITLE: WATER OPERATOR HOME-STUDY TRAINING PROGRAM.

PERSONAL AUTHOR: KERRI, KENNETH D.

DESCRIPTOR: *CERTIFICATION; *CORRESPONDENCE COURSES; *HOME STUDY; *OPERATIONS (WATER); *OPERATOR TRAINING; *POSTSECONDARY EDUCATION; *PROGRAM DESCRIPTIONS; *TRAINING; *WATER TREATMENT

DESCRIPTIVE NOTE: 16P.

ABSTRACT: THIS PUBLICATION PROVIDES STATE WATER CERTIFICATION/TRAINING OFFICES WITH VARIOUS APPROACHES THAT CAN BE USED TO INCORPORATE THE WATER OPERATOR HOMESTUDY TRAINING PROGRAM DEVELOPED BY CALIFORNIA STATE UNIVERSITY, SACRAMENTO, FOR THE USEPA.

AVAILABILITY: CALIFORNIA STATE UNIVERSITY, SCHOOL OF ENGINEERING, WATER PROGRAMS, C/O MR. KENNETH D. KERRI, 6000 "J" STREET, SACRAMENTO, CA 95819-2694

IRIS ACCESSION NUMBER: EW012214

PUBLICATION DATE: 84

TITLE: 1984 ANNUAL INDEX, ENVIRONMENTAL POLLUTION AND CONTROL, AN ABSTRACT NEWSLETTER.

DESCRIPTOR: *AIR; *ANNUAL INDEXES; *ENVIRONMENT; *HEALTH; *NOISE; *NTIS; *PESTICIDES; *POLLUTION CONTROL; *RADIATION; *SAFETY; *SOLID WASTES; *WATER; *WASTEWATER

DESCRIPTIVE NOTE: 365P. ORDER NO.: PB84-906852

ABSTRACT: THIS IS THE ANNUAL INDEX FOR 1984 TO THE ENVIRONMENTAL POLLUTION AND CONTROL NEWSLETTER PUBLISHED BY NTIS. SECTIONS ARE INCLUDED ON (1) AIR, (2) NOISE, (3) SOLID WASTES, (4) WATER, (5) PESTICIDES, (6) RADIATION, (7) ENVIRONMENTAL HEALTH AND SAFETY, AND (8) ENVIRONMENTAL IMPACT STATEMENTS. ORDER INFORMATION IS PROVIDED FOR EACH ENTRY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012215

PUBLICATION DATE: 85

TITLE: PREVENTION AND RESOLUTION OF CONTRACTOR CLAIMS: EPA CONSTRUCTION GRANT PROGRAM GUIDANCE FOR MUNICIPAL GRANTS.

DESCRIPTOR: *CLAIM PREVENTION; *CLAIM RESOLUTION; *CLAIMS; *CONTRACTOR CLAIMS; *CONSTRUCTION GRANT PROGRAM; *MANAGEMENT; *MUNICIPAL GRANTS; *USEPA

DESCRIPTIVE NOTE: 12P. PRICE: $1.00

ABSTRACT: THE PURPOSE OF THIS PUBLICATION IS TO ASSIST THE GRANTEE IN REDUCING THE FREQUENCY, COST AND IMPACT OF CONTRACTOR CLAIMS IN THE CONSTRUCTION GRANTS PROGRAM. INFORMATION IS PROVIDED TO ASSIST GRANTEES IN CLAIMS MANAGEMENT, TO ASSIST REVIEWING AGENCIES IN MAKING APPROPRIATE ALLOWABILITY DETERMINATIONS AND TO DISTINGUISH BETWEEN PROPER AND IMPROPER MANAGEMENT PRACTICES IN SPECIFIC SITUATIONS. MANY OF THE COMMON CAUSES OF CLAIMS ARE DISCUSSED. TECHNIQUES FOR CLAIM PREVENTION AND RESOLUTION ARE RECOMMENDED AND CRITERIA TO BE USED IN CLAIM RELATED ALLOWABILITY DETERMINATION ARE OUTLINED.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012231

PUBLICATION DATE: 84

TITLE: NATIONAL MARINE POLLUTION PROGRAM: AGENCY PROGRAM SUMMARIES FY 1983 UPDATE.

DESCRIPTOR: *DEVELOPMENT; *MONITORING; *NATIONAL MARINE POLLUTION PLANNING ACT; *OCEANOGRAPHY; *OCEAN POLLUTION; *RESEARCH

DESCRIPTIVE NOTE: 311P. PRICE CODE: PC A14/MF A01. ORDER NO.: PB85-139004/WEP

ABSTRACT: THE NATIONAL OCEAN POLLUTION PLANNING ACT CALLS FOR THIS PLAN TO INCLUDE A DETAILED LISTING OF ALL EXISTING FEDERAL PROGRAMS RELATED TO OCEAN POLLUTION RESEARCH, DEVELOPMENT, AND MONITORING. THE FOLLOWING REPORT REPRESENTS THE FY 1983 UPDATE OF THIS LISTING. THE AGENCY PROGRAM SUMMARIES: FY 1983 UPDATE PRESENTS AN OVERVIEW OF THE ACTIVITIES OF EACH OF THE ELEVEN FEDERAL DEPARTMENTS AND AGENCIES THAT ARE CURRENTLY ENGAGED IN MARINE POLLUTION PROGRAMS. THE UPDATE REVIEWS THE MARINE POLLUTION PROGRAMS UNDERTAKEN BY EACH OF THESE DEPARTMENTS AND AGENCIES BY DESCRIBING PROGRAM GOALS, OBJECTIVES, RECENT ACCOMPLISHMENTS, FUTURE MILESTONES, FUNDING FOR FISCAL YEARS 1982 THROUGH 1985, AND LEGISLATIVE MANDATES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012235

PUBLICATION DATE: 84

TITLE: USEPA (UNITED STATES ENVIRONMENTAL PROTECTION AGENCY) RESEARCH GRANTS AND CENTERS SUMMARY OF AWARDS FISCAL YEAR 1980 THRU 1983.

DESCRIPTOR: *AIR POLLUTION CONTROL; *CONTRACTS; *GRANTS; *RESEARCH; *USEPA; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 354P. PRICE CODE: PC A16/MF A01. ORDER NO.: PB85-125636/WEP

ABSTRACT: THE USEPA IS CHARGED, THROUGH A SERIES OF LAWS AND EXECUTIVE ORDERS, WITH REDUCING AIR AND WATER POLLUTION AND FINDING A COMPREHENSIVE APPROACH TO SOLVING OTHER ENVIRONMENTAL PROBLEMS ASSOCIATED WITH TOXIC AND HAZARDOUS SUBSTANCES. EPA'S OFFICE OF RESEARCH AND DEVELOPMENT FUNDS RESEARCH, DEVELOPMENT AND DEMONSTRATION EFFORTS IN SUPPORT OF EPA'S MANDATE. THIS IS DONE THROUGH RESEARCH GRANTS, COOPERATIVE AGREEMENTS, AND NEGOTIATED CONTRACTS. RESEARCH GRANTS ARE UTILIZED MAINLY IN SUPPORT OF INVESTIGATOR-INITIATED, LONG-RANGE RESEARCH ACTIVITIES WHICH ARE SUBJECT TO A HIGHLY COMPETITIVE, EXTRAMURAL PEER-REVIEW, AND IN-HOUSE PRIORITY PROCESS. THE LONG-RANGE AGENDA COMMENCED IN FY 1980 WITH A RESEARCH GRANTS ACTIVITY. THE CONTENTS OF THIS SUMMARY OF AWARDS INCLUDES ESSENTIALLY ALL SUCH GRANTS ISSUED SINCE THE PROGRAM'S INCEPTION AS THE OFFICE OF RESEARCH GRANTS AND CENTERS, IN THE OFFICE OF EXPLORATORY RESEARCH LOCATED IN EPA'S HEAD-QUARTERS, WASHINGTON, DC.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE; 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012244

PUBLICATION DATE: 84

TITLE: METHODOLOGY FOR EVALUATION OF INTEGRATED WATER REUSE ALTERNATIVES.

PERSONAL AUTHOR: FORDHAM, J. W., AND COCHRAN, C. F.

DESCRIPTOR: *EVALUATION; *MANAGEMENT; *MODELS; *NETWORKS; METHODOLOGY; NEVADA; *WATER REUSE; *WATER SUPPLY; *WATER RESOURCES

DESCRIPTIVE NOTE: 92P. PRICE CODE: PC A05/MF A01. ORDER NO.: PB85-128734/WEP

ABSTRACT: THIS STUDY ADDRESSES THE PROBLEM OF INTEGRATING REUSE WITHIN A TOTAL WATER SUPPLY WASTEWATER MANAGEMENT CONTEXT OVER A REASONABLE PLANNING HORIZON IN A MANNER THAT EXPLICITLY INCORPORATES HYDROLOGIC VARIABILITY AND UNCERTAINTY OF FUTURE DEMANDS. THE SOLUTION APPROACH UTILIZES A FORMULATION OF THE TRANSPORTATION NETWORK, LINKING NUMEROUS 'SINGLE' TIME NETWORKS TOGETHER, INCORPORATING IN THE TIME SEQUENTIAL DECISION PROCESS HYDROLOGIC VARIABILITY. IT CONSIDERS CARRY OVER STORAGE FOR SURFACE AND GROUNDWATER FACILITIES AND SEASONAL DEMANDS. AN INITIAL MODEL WAS SET UP USING A HYPOTHETICAL SIMPLE SUPPLY-REUSE-WASTEWATER DISPOSAL SYSTEM AND THEN EXTENDED TO THE MORE COMPLEX REAL-WORLD SETTING OF CARSON CITY, NEVADA.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012234

PUBLICATION DATE: 85

TITLE: DETERMINATION OF ACTIVATED SLUDGE BIOKINETIC CONSTANTS FOR CHEMICAL AND PLASTIC INDUSTRIAL WASTEWATERS: APPENDIX B.

PERSONAL AUTHOR: KINCANNON, D. F., AND STOVER, E. L.

DESCRIPTOR: *ACTIVATED SLUDGE; ANALYTICAL TECHNIQUES; *BIOKINETIC CONSTANTS; *CHEMICALS; *CHEMICAL INDUSTRY; INDUSTRY; *PLASTIC INDUSTRY; PRIORITY POLLUTANTS; *WASTEWATER; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 194P. PRICE CODE: PC A09/MF A01. ORDER NO.: PB85-165488/WEP

ABSTRACT: THE MOST WIDELY USED METHOD OF WASTEWATER TREATMENT IS BIOLOGICAL TREATMENT. THE USE OF KINETIC MODELS TO DESCRIBE THE BEHAVIOR OF A BIOLOGICAL WASTEWATER TREATMENT PROCESS HAS BECOME WIDELY ACCEPTED PRACTICE. THE MOST OFTEN USED KINETIC MODELS INCLUDE THOSE DEVELOPED BY ECKENFELDER, MCKINNEY, LAWRENCE AND MCCARTY, AND GAUDY. ALL OF THESE MODELS CONTAIN KINETIC CONSTANTS, AND THE USEFULNESS OF EACH MODEL IS A FUNCTION OF THE RELIABILITY OF THE KINETIC CONSTANTS. HOWEVER, THERE HAS NOT BEEN ENOUGH INFORMATION AVAILABLE TO ESTABLISH RELIABLE VALUES FOR THESE KINETIC CONSTANTS FOR INDUSTRIAL WASTEWATERS. THIS CONTINUED PROJECT HAS DETERMINED THE BIOKINETIC CONSTANTS AND FATE FOR TWELVE ADDITIONAL TOXIC ORGANIC POLLUTANTS WHEN PRESENT IN A HIGHLY BIODEGRADABLE WASTEWATER. THE NORMAL APPROACH FOR DETERMINING BIOKINETIC CONSTANTS HAS BEEN TO PLOT THE AVERAGE VALUES. THIS APPROACH MASKS THE ACTUAL SCATTER OF THE DATA. THIS STUDY HAS PRODUCED A METHODOLOGY FOR ANALYSIS OF THE TEST RESULTS FROM BIOLOGICAL ACTIVATED SLUDGE SYSTEMS FOR DETERMINING THE BIOLOGICAL VARIABILITY INHERENT IN THESE TYPES OF SYSTEMS. THIS STUDY ALSO INVESTIGATED THE POSSIBILITY OF PREDICTING THE FATE AND EFFLUENT CONCENTRATIONS OF THE VARIOUS PRIORITY POLLUTANTS. IT WAS FOUND THAT GOOD PREDICTIONS FOR THE PRIORITY POLLUTANTS CAN BE MADE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012260

PUBLICATION DATE: 84

TITLE: ELECT GROUNDWATER TRANSPORT RESEARCH CODE. FINAL REPORT.

DESCRIPTOR: *CONTAMINANT TRANSPORT; *CONTAMINATION; *GROUNDWATER; *COMPUTER APPLICATIONS; *RESEARCH REPORTS

DESCRIPTIVE NOTE: 73P. PRICE CODE: PC A04/MF A01. ORDER NO.: DE85003284/WEP

ABSTRACT: THE OBJECTIVE OF THIS PROJECT WAS TO PRODUCE A COMPUTER CODE FOR THE SOLUTION OF A WIDE RANGE OF CONTAMINANT TRANSPORT PROBLEMS. BASED ON NEUMAN'S ADAPTIVE METHOD, IT COMBINES THE DESIRABLE FEATURES OF BOTH THE METHOD OF CHARACTERISTICS AND THE FINITE ELEMENT METHOD. THIS SHOULD MAKE THE CODE APPLICABLE TO A WIDE RANGE OF PROBLEMS IF THE ADAPTIVE PROCESS CAN BE APPROPRIATELY CONTROLLED. IN ITS PRESENT STATE THE CODE SHOULD BE CONSIDERED A PARTIALLY COMPLETED RESEARCH CODE. TIME AND FUNDING LIMITATIONS PREVENTED FINDING THOSE PARAMETER VALUES AND PROCEDURES NECESSARY TO ADEQUATELY CONTROL THE ADAPTIVE SOLUTION METHOD. THIS DOCUMENT INCLUDES THE ANALYTICAL SOLUTION AND PROGRAM INPUT DATA SETS FOR THE ONE- AND TWO-DIMENSIONAL TRANSPORT PROBLEMS BEING USED TO DETERMINE THE NEEDED CONTROLS. THESE TWO SAMPLE PROBLEMS PROVIDE A MEANS FOR CONTINUING THE STUDY OF THE ADAPTIVE PARAMETERS FOR THE CODE. 13 REFERENCES, 4 FIGURES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012265

PUBLICATION DATE: 84

TITLE: BEFORE THE WELL RUNS DRY, VOLUME II.

DESCRIPTOR: *DROUGHT; *MANAGEMENT; *PLANNING; *WATER RESOURCES; *WATER WELLS; *WATER SUPPLY; *WELLS; *WATER DEMAND; *WATER EMERGENCIES

DESCRIPTIVE NOTE: 64P. PRICE: $12.00 MEMBER PRICE; $15.00 NONMEMBER PRICE

ABSTRACT: THIS PUBLICATION PROVIDES A CONTINGENCY PLAN FOR COPING WITH DROUGHT. THROUGH SPECIFIC CASE STUDIES THIS HANDBOOK PROVIDES OPTIONS AVAILABLE FOR ALLEVIATING THE PROBLEMS OF DROUGHT.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, COMPUTER SERVICES DEPARTMENT, 6666 WEST QUINCY AVENUE, DENEVER, CO 80235

IRIS ACCESSION NUMBER: EW012266

PUBLICATION DATE: 84

TITLE: EXPERIENCES WITH GROUNDWATER CONTAMINATION.

DESCRIPTOR: *CONTAMINATION; *GROUNDWATER; *CONFERENCE PROCEEDINGS; *HAZARDOUS WASTES; *REGULATIONS; *TECHNOLOGY; *WATER QUALITY; *WATER TREATMENT; *WASTE DISPOSAL; *WATER RESOURCES; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 156P. PRICE: $13.00 MEMBER PRICE; $16.00 NONMEMBER PRICE

ABSTRACT: THIS IS A COLLECTION OF PAPERS FROM A SEMINAR HELD AT AWWA'S 1984 ANNUAL CONFERENCE IN DALLAS, TEXAS. PAPERS ARE INCLUDED ON TREATMENT, REGULATION, HANDLING WASTES FROM TREATMENT SYSTEMS, AND WASTE DISPOSAL PRACTICES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, COMPUTER SERVICES DEPARTMENT, 6666 WEST QUINCY AVENUE, DENVER, CO 80235

IRIS ACCESSION NUMBER: EW012267

PUBLICATION DATE: 84

TITLE: HYDRAULIC AND WATER LOSS CONTROL.

DESCRIPTOR: *EQUIPMENT; *HYDRAULICS; *LEAKS; *LEAK DETECTION; *MEASUREMENT; *WATER AUDITS; *WATER LOSS; *WATER SUPPLY

DESCRIPTIVE NOTE: PRICE: $10.00 MEMBER PRICE; $12.50 NON-MEMBER PRICE

ABSTRACT: THIS PUBLICATION IS DESIGNED TO SHOW HOW TO ISOLATE, MEASURE, AND SOLVE UNACCOUNTED FOR WATER PROBLEMS. THE ARTICLES INCLUDED IN THE PUBLICATION WERE PRESENTED AT THE 1984 AWWA ANNUAL CONFERENCE.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, COMPUTER SERVICES DEPARTMENT, 6666 WEST QUINCY AVENUE, DENVER, CO 80235

IRIS ACCESSION NUMBER: EW012268

PUBLICATION DATE: 84

TITLE: ENGINEERING SOFTWARE GUIDE FOR THE APPLE COMPUTER.

PERSONAL AUTHOR: PENTLICKY, G.

DESCRIPTOR: *CHEMICAL ENGINEERING; *COMPUTER APPLICATIONS; *COMPUTER SOFTWARE; *DIRECTORIES; *CIVIL ENGINEERING; *ELECTRICAL ENGINEERING; *MATHEMATICS; *UTILITIES

DESCRIPTIVE NOTE: PRICE: $50.00

ABSTRACT: THIS PUBLICATION PROVIDES REFERENCE TO ENGINEERING SOFTWARE THAT IS AVAILABLE FOR THE APPLE COMPUTER. THE DIRECTORY IS ORGANIZED BY CATEGORY AND HAS SECTIONS ON : (1) CIVIL; (2) MECHANICAL; (3) ELECTRICAL; (4) CHEMICAL ENGINEERING; (5) MATH; AND (6) UTILITIES. EACH ENTRY CATEGORIZES THE SOFTWARE FOR USER FRIENDLINESS, OPERATING SYSTEM, MEMORY REQUIREMENTS AND OTHER IMPORTANT FEATURES.

AVAILABILITY: CAE CONSULTANTS, INC., 41 TRAVERS AVENUE, YONKERS, NY 10705

IRIS ACCESSION NUMBER: EW012269

PUBLICATION DATE: 83

TITLE: GLOBAL ECOLOGY.

PERSONAL AUTHOR: SOUTHWICK, CHARLES H., ED.

DESCRIPTOR: *ECOLOGY; *ENVIRONMENT; *POLLUTION; *SCIENCES; *TRENDS; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 324P. PRICE: $14.95

ABSTRACT: GLOBAL ECOLOGY IS A COLLECTION OF RECENT PAPERS AND ORIGINAL ESSAYS THAT EXPLORE THE BIOSPHERE--ITS NATURE, EXTENT, FUNCTIONAL PROPERTIES, AND CURRENT CONDITION. SECTIONS ARE INCLUDED ON (1) DIVERGENT VIEWS OF THE STATE OF THE WORLD, (2) PRINCIPLES AND TRENDS IN GLOBAL ECOLOGY, (3) PROBLEMS OF POLLUTION AND ENVIRONMENTAL DETERIORATION, (4) HUMANISTIC CONSIDERATIONS, AND (5) SCIENCE, CONFLICT, AND HUMAN PROSPECTS.

AVAILABILITY: SINAUER ASSOCIATES, INC., SUNDERLAND, MA 01375

IRIS ACCESSION NUMBER: EW012273

PUBLICATION DATE: 84

TITLE: CROP PROTECTION CHEMICALS REFERENCE. FIRST EDITION.

DESCRIPTOR: *AGRICULTURE; *CHEMICALS; *CHEMICAL DISPOSAL; *DIRECTORIES; *HERBICIDES; *DISPOSAL SITES; *PESTICIDES; *SAFETY; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 1490+P. PRICE: $49.95

ABSTRACT: THIS IS AN EXTENSIVE GUIDE TO CHEMICALS USED FOR CROP PROTECTION. INFORMATION INCLUDES LISTS OF CHEMICALS, CROPS, AND PESTS. THE PUBLICATION ALSO PROVIDES INFORMATION ON SAFE APPLICATION, POISON CONTROL CENTERS, AND STATE APPROVED DISPOSAL SITES.

AVAILABILITY: CHEMICAL AND PHARMACEUTICAL PUBLISHING CORPORATION, P.O. BOX C - 059002, BROOKLYN, NY 11205-9990

IRIS ACCESSION NUMBER: EW012276

PUBLICATION DATE: 84

TITLE: GROUNDWATER MONITORING RECOMMENDATIONS FOR OIL SHALE DEVELOPMENT. PROJECT SUMMARY.

PERSONAL AUTHOR: EVERETT, L. G.

DESCRIPTOR: *GROUNDWATER; *ENVIRONMENT; *INDUSTRY; *MONITORING; *OIL SHALE; *POLLUTION CONTROL; *RECOMMENDATIONS; *REPORTS; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 5P. PRICE: $1.25

ABSTRACT: EPA IS COMPLETING A FIVE-YEAR PROJECT TO DEVELOP GROUNDWATER QUALITY MONITORING RECOMMENDATIONS FOR WESTERN U.S. OIL SHALE DEVELOPMENT. FOUR REPORTS HAVE BEEN PUBLISHED PREVIOUSLY BY EPA. ANOTHER REPORT, WHICH IS EMPHASIZED IN THIS SUMMARY, HAS BEEN RECENTLY PUBLISHED. ALL FIVE REPORTS

ARE DESCRIBED IN THIS PROJECT SUMMARY. INFORMATION ON AVAILABILITY OF THE REPORTS ARE INCLUDED ALSO.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012277

PUBLICATION DATE: 84

TITLE: EFFECTIVE FILTRATION METHODS FOR SMALL WATER SUPPLIES. PROJECT SUMMARY.

PERSONAL AUTHOR: CLEASBY, JOHN L.; AND OTHERS

DESCRIPTOR: *BACTERIA; *DRINKING WATER; *FILTRATION; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *RURAL AREAS; *WATER TREATMENT; *TURBIDITY

ABSTRACT: A TWO-YEAR STUDY WAS CONDUCTED OF VARIOUS SIMPLE WATER FILTRATION SYSTEMS POTENTIALLY APPROPRIATE FOR HIGH-QUALITY SURFACE WATERS SERVING SMALL SYSTEMS. THE STUDY WAS DESIGNED TO EMPHASIZE SIMPLE TREATMENT SYSTEMS FOR SMALL SUPPLIES WHERE OPERATIONAL SKILL AND ATTENTION MAY BE LACKING. THE SYSTEMS WERE COMPARED WHILE MONITORING TURBIDITY, PARTICLE COUNT, AND COLIFORM BACTERIA IN THE INFLUENT AND FILTERED WATER. CONCLUSIONS ARE REPORTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012278

PUBLICATION DATE: 84

TITLE: EVALUATION OF PROCESS SYSTEMS FOR EFFECTIVE MANAGEMENT OF ALUMINUM FINISHING WASTEWATER AND SLUDGE. PROJECT SUMMARY.

PERSONAL AUTHOR: SAUNDERS, F. M.; AND OTHERS

DESCRIPTOR: *ALUMINUM; *INDUSTRY; *INDUSTRIAL WASTES; *METALS; *METAL INDUSTRY; *OPERATIONS (WASTEWATER); *RECOMMENDATIONS; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SLUDGE; *TECHNOLOGY; *WASTEWATER TREATMENT

ABSTRACT: INNOVATIVE PROCESSES FOR USE IN TREATMENT OF WASTEWATERS AND SLUDGES PRODUCED IN ANODIZING, ETCHING, AND PAINTING EXTRUDED ALUMINUM WERE INVESTIGATED. RESULTS OF THE RESEARCH CAN BE IMMEDIATELY IMPLEMENTED AT MANY ALUMINUM-FINISHING PLANTS WHERE SLUDGE DISPOSAL RESTRICTIONS AND COSTS ARE INCREASING.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012280

PUBLICATION DATE: 84

TITLE: TRENDS IN U.S. IRRIGATION: THREE REGIONAL STUDIES. PROJECT SUMMARY.

PERSONAL AUTHOR: FREDERICK, KENNETH D.; AND OTHERS

DESCRIPTOR: *AGRICULTURE; *ECONOMICS; *ENVIRONMENT; *IRRIGATION; *POLICIES; *TRENDS; *UNITED STATES; *WATER RESOURCES; *WATER SUPPLY

ABSTRACT: THREE SEPARATE REPORTS, EACH DEALING WITH IRRIGATION IN A DIFFERENT REGION OF THE UNITED STATES, ARE BROUGHT TOGETHER IN THIS VOLUME. TOGETHER, THEY PROVIDE A COMPREHENSIVE VIEW OF THE PROSPECTS FOR IRRIGATED AGRICULTURE IN THE UNITED STATES OVER THE NEXT SEVERAL DECADES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012281

PUBLICATION DATE: 85

TITLE: SOLIDIFICATION/STABILIZATION OF SLUDGE AND ASH FROM WASTEWATER TREATMENT PLANTS.

PERSONAL AUTHOR: MALONE, PHILIP G.; JONES, LARRY W.

DESCRIPTOR: *ASH; *COSTS; *OPERATIONS (WASTEWATER); *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 102P. PRICE: $7.72

ABSTRACT: TESTS WERE PERFORMED TO DETERMINE THE PHYSICAL PROPERTIES AND CHEMICAL LEACHING CHARACTERISTICS OF THE RESIDUALS AND THE STABILIZED/SOLIDIFIED PRODUCTS FROM TWO PUBLICLY OWNED WASTEWATER TREATMENT WORKS (POTW). THE TWO POTW WASTE PRODUCTS INCLUDED IN THIS STUDY WERE AN ANAEROBIC DIGESTER SLUDGE FROM AN IMHOFF DIGESTER AND AN ASH FROM A ROTATING HEARTH INCINERATOR USED TO DESTROY PRIMARY SETTLER AND DIGESTER SLUDGES. THREE DIFFERENT SOLIDIFICATION/STABILIZATION SYSTEMS WERE USED. ONE OF THE SYSTEMS WAS BASED ON THE ADDITION OF CEMENT AND SOLUBLE SILICATES IN VARIOUS PROPORTIONS AND FORMED SOIL-LIKE SOLIDS THAT WERE SOFT AND EASILY BROKEN. A SECOND SYSTEM USED LIME AND FLYASH TO FORM A POZZOLANIC MATERIAL THAT PRODUCED A HARD, CONCRETE-LIKE SOLID. THE THIRD SYSTEM WAS BASED ON THE FORMATION OF GYPSUM IN THE WASTE AFTER ACIDIFICATION; THESE PRODUCTS REMAINED WET AND DID NOT HARDEN. NONE OF THE TREATED PRODUCTS WERE VERY DURABLE, AS NONE SURVIVED THE FULL SEQUENCE OF 12 CYCLES AND THE WET-DRY OR FREEZE-THAW TESTING. THE POZZOLANIC, FLYASH-LIME PRODUCT REDUCED THE LOSS OF CONSTITUENTS TO THE LEACHING MEDIUM TO THE GREATEST EXTENT. IT ALSO PRODUCED BY FAR THE SMALLEST INCREASE IN THE WEIGHT OF THE WASTE TO BE DISPOSED FOR ANY OF THE PROCESSES--170% OF THE DRY SLUDGE SOLIDS. THESE FACTS COUPLED WITH THE LOW COST OF THE SOLIDIFICATION AGENTS MAKE THIS PROCESS THE MOST COST-EFFECTIVE OF THOSE TESTED IN THIS STUDY.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012282

PUBLICATION DATE: 83

TITLE: RISK ASSESSMENT OF WASTEWATER DISINFECTION.

PERSONAL AUTHOR: HUBLY, DAVID; AND OTHERS

DESCRIPTOR: *DATABASES; *DISINFECTION; CHLORINATION; COSTS; ENERGY USE; ENVIRONMENTAL IMPACT; OZONATION; *RISK ASSESSMENT; SAFETY; ULTRAVIOLET RADIATION; TRANSPORTATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 135P. PRICE: $12.10

ABSTRACT: A RISK ASSESSMENT DATA BASE IS PRESENTED FOR SEVERAL WASTEWATER DISINFECTION ALTERNATIVES, INCLUDING CHLORINATION, OZONATION, CHLORINATION/DECHLORINATION, AND ULTRAVIOLET RADIATION. THE DATA BASE COVERS HAZARDS AND CONSEQUENCES RELATED TO ONSITE USE AND TRANSPORTATION OF THE DISINFECTANTS AND ULTIMATE DISPOSAL OF DISINFECTED EFFLUENTS. A MAJOR SEGMENT OF THE DATA BASE DEALS WITH THE EFFECTS OF CHLORINATION PRODUCTS IN AQUATIC ECOSYSTEMS. ENERGY CONSUMPTION AND COST ANALYSES ARE ALSO PRESENTED FOR CHLORINATION AND OZONATION. EXAMPLE RISK CALCULATIONS ARE PRESENTED FOR TWO HYPOTHETICAL WASTEWATER TREATMENT PLANTS. THE USEFULNESS OF THE DATA BASE FOR RISK ASSESSMENT IS ALSO DISCUSSED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012283

PUBLICATION DATE: 83

TITLE: SELECTED TOPICS RELATED TO INFILTRATION AND INFLOW IN SEWER SYSTEMS.

PERSONAL AUTHOR: SULLIVAN, RICHARD H.; EWING, JAMES W.

DESCRIPTOR: *INFILTRATION; *INFLOW; *MAINTENANCE; *PERFORMANCE EVALUATION; *PROBLEMS; *OPERATIONS (WASTEWATER); *REHABILITATION; *SEWERS; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 87P. PRICE: $6.22

ABSTRACT: THIS PROJECT WAS UNDERTAKEN AS A REVIEW OF THE CURRENT STATE-OF-THE-ART IN INFILTRATION/INFLOW CONTROL AND TO PRESENT INFORMATION NOT INCLUDED IN EARLIER MANUALS AND REPORTS ON THIS SUBJECT. A SERIES OF NINE REGIONAL SEMINARS WAS CONDUCTED TO EXPLORE LOCAL PROBLEMS AND PRACTICES FOR SOLUTION. CHAPTERS IN THIS REPORT RESPOND TO PROBLEM AREAS DISCUSSED AT THESE SEMINARS. BESIDES AN OVERVIEW, THE REPORT

INCLUDES INFORMATION ON PROBLEM DETERMINATION AS APPROACHED BY THE WASHINGTON SUBURBAN SANITARY COMMISSION, METHODS FOR FLOW DETERMINATION INCLUDING A DISCUSSION OF ACCURACY, ECONOMICS OF SEWER REHABILITATION, METHODS OF REHABILITATION, LONG-TERM REHABILITATION PROGRAMS, AND LONG-TERM FLOW MINITORING. A BRIEF DISCUSSION IS INCLUDED OF THE MAJOR PROBLEMS DISCUSSED AT THE REGIONAL SEMINARS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012284

PUBLICATION DATE: 85

TITLE: RUTGERS STRATEGY FOR COMPOSTING PROCESS DESIGN AND CONTROL.

PERSONAL AUTHOR: FIRSTEIN, M. S.; AND OTHERS

DESCRIPTOR: *COMPOSTING; *PERFORMANCE EVALUATION; *RUTGERS STRATEGY; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 290P. PRICE: $18.40

ABSTRACT: A STRATEGY FOR SLUDGE COMPOSTING WAS DEVELOPED TO COUNTER THE TENDENCY OF OTHER COMPOSTING SYSTEMS TO OPERATE AT HIGH TEMPERATURES THAT INHIBIT AND SLOW DECOMPOSITION. THIS METHOD, KNOWN AS THE RUTGERS STRATEGY, CAN BE IMPLEMENTED IN A STATIC PILE CONFIGURATION TO RETAIN STRUCTURAL AND OPERATIONAL SIMPLICITY, OR IN A MORE ELABORATE ENCLOSED OR REACTOR STRUCTURE SYSTEM. THE METHOD MAINTAINS A TEMPERATURE CEILING THAT PROVIDES A HIGH DECOMPOSITION RATE THROUGH ONDEMAND REMOVAL OF HEAT BY VENTILATION (THERMOSTATIC CONTROL OF A BLOWER). COMPARED WITH THE APPROACH CURRENTLY IN WIDESPREAD USE, THE RUTGERS STRATEGY YIELDS HIGH-RATE COMPOSTING THAT DECOMPOSES FOUR TIMES MORE WASTE IN HALF THE TIME.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012285

PUBLICATION DATE: 85

TITLE: PROCEEDINGS: SEMINAR WORKSHOP ON AERATION SYSTEM DESIGN, TESTING, OPERATION AND CONTROL.

PERSONAL AUTHOR: BOYLE, WILLIAM C., ED.

DESCRIPTOR: *AERATION SYSTEMS; *CONTROLS; *DESIGN; *EQUIPMENT; *MAINTENANCE; *OPERATIONS (WASTEWATER); *TECHNOLOGY; *WORKSHOPS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 478P. PRICE: $29.68

ABSTRACT: THE OBJECTIVE OF THIS SEMINAR/WORKSHOP FOR

CONSULTING ENGINEERS, PLANNERS, AND OTHER PROFESSIONALS WAS TO EXCHANGE INFORMATION ON RECENT RESEARCH AND DEVELOPMENT ACTIVITIES IN THE UNITED STATES, CANADA, AND EUROPE ON THE DESIGN, OPERATION, CONTROL, AND TESTING OF AERATION SYSTEMS. THE 3-DAY SEMINAR/WORKSHOP CONSISTED OF SHORT, FORMAL DISCUSSIONS FOLLOWED BY AN AFTERNOON WORKSHOP SESSION. PAPERS AND CURRENT TECHNICAL DATA ON SELECTED TOPICS WERE PRESENTED IN SEVERAL TECHNICAL SESSIONS INCLUDING AERATION SYSTEM DESIGN, OPERATION, AND MAINTENANCE; AERATION SYSTEM CONTROL; SPECIFICATION AND TESTING OF AERATION EQUIPMENT; AND TRANSLATION OF OXYGEN TRANSFER DATA FROM CLEAN WATER TO PROCESS CONDITIONS. A SUMMARY OF THE AFTERNOON WORKSHOP SESSIONS IS ALSO PRESENTED AS A PORTION OF THESE PROCEEDINGS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012286

PUBLICATION DATE: 85

TITLE: DETERMINATION AND PREDICTION OF CHEMICAL FORMS OF TRACE METALS IN SEWAGE SLUDGE AND SLUDGE-AMENDED SOILS.

PERSONAL AUTHOR: LUND, L. J.; AND OTHERS

DESCRIPTOR: *CHEMICAL REACTIONS; *CHEMICALS; *LAND APPLICATION; *METALS; *RESEARCH REPORTS; *SEWAGE SLUDGE; *SLUDGE; *SOILS; *TRACE METALS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 244P. $15.64

ABSTRACT: THE OVERALL OBJECTIVE OF THE RESEARCH CONDUCTED UNDER THIS PROJECT WAS TO DEFINE THE CHEMICAL EQUILIBRIUM BETWEEN TRACE METALS AND THE SOLUBLE AND INSOLUBLE ORGANIC AND INORGANIC FRACTIONS OF SEWAGE SLUDGES AND SLUDGE-AMENDED SOIL. THIS REPORT IS DIVIDED ACCORDING TO TASKS CARRIED OUT TO FULFILL THIS OBJECTIVE. THE ADAPTATION AND DEVELOPMENT OF A COMPUTER PROGRAM, GEOCHEM, FOR PREDICTION OF THE DISTRIBUTION OF CHEMICAL SPECIES IN SOIL SOLUTION IS DESCRIBED IN SECTION I. RESEARCH ON THE FRACTIONATION AND CHARACTERIZATION OF SEWAGE SLUDGES IS DISCUSSED IN SECTION II. STUDIES ON SLUDGE DECOMPOSITION AND EXTRACTABILITY OF ADDED METALS FROM SLUDGE-AMENDED SOILS ATION AND EXTRACTABILITY OF ADDED METALS FROM SLUDGE-AMENDED SOILS ARE DISCUSSED IN SECTION III. INFRARED STUDIES OF SOLUBLE COMPONENTS IN WATER EXTRACTS OF THE SLUDGE-AMENDED SOILS AS WELL AS SPECIATION DATA OBTAINED FROM THE GEOCHEM PROGRAM ARE ALSO REPORTED IN SECTION III. RESEARCH RELATED TO PARTITIONING TRACE METALS IN SLUDGE-AMENDED SOILS INTO VARIOUS FORMS BY A FRACTIONATION PROCEDURE IS DISCUSSED IN SECTION IV. CONSIDERED COLLECTIVELY THESE RESEARCH TASKS HAVE CONTRIBUTED SIGNIFICANTLY TO THE UNDERSTANDING OF REACTIONS AND FORMS OF METALS IN SOILS AMENDED WITH SEWAGE SLUDGE.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012287

PUBLICATION DATE: 85

TITLE: DETERMINATION OF TOXIC CHEMICALS IN EFFLUENT FROM HOUSEHOLD SEPTIC TANKS.

PERSONAL AUTHOR: DEWALLE, FOPPE B.; AND OTHERS

DESCRIPTOR: *CHEMICALS; *EFFLUENTS; *OPERATIONS (WASTEWATER); *ORGANIC CHEMICALS; *SEPTIC TANKS; *TOXIC CHEMICALS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 40P. PRICE: $3.40

ABSTRACT: THE REPORT STUDY EVALUATED THE PRESENCE OF VOLATILE ORGANICS IN RAW DOMESTIC SEWAGE GENERATED IN A SUBDIVISION AND TREATED BY A LARGE 5-YEAR-OLD COMMUNITY SEPTIC TANK THAT HAD RECENTLY BEEN CLEANED BY HAVING THE SOLIDS REMOVED BY PUMPING JUST PRIOR TO THIS STUDY. ANALYSIS SHOWED THE PRESENCE OF PRIORITY POLLUTANTS IN THE RAW SEWAGE. ESSENTIALLY NO REMOVAL OF THESE COMPOUNDS OCCURRED DURING THE 2-DAY DETENTION IN THE SEPTIC TANK. THE PRIORITY POLLUTANTS GENERALLY SHOWED HIGHER LEVELS DURING THE WEEKEND, PROBABLY REFLECTING LEISURE ACTIVITIES AND USE OF RELATED CHEMICALS (PAINT THINNERS, GREASE REMOVERS, TOILET BOWL CLEANERS, ETC.), THAN DURING THE WEEK DAYS. MOST OF THE OTHER VOLATILE COMPOUNDS WERE HYDROCARBONS, AND THEIR REMOVAL BY THE SEPTIC TANK GENERALLY DECERASED WITH INCTEASING MOLECULAR WEIGHT. SEVERAL ORGANIC SULFUR COMPOUNDS SHOWED SUBSTANTIAL INCREASE AS A RESULT OF ANAEROBIC DEGRADATION PROCESSES IN THE SEPTIC TANK.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012288

PUBLICATION DATE: 85

TITLE: INVESTIGATIONS OF EXISTING PRESSURE SEWER SYSTEMS.

PERSONAL AUTHOR: REZEK, JOSEPH W.; COOPER, IVAN A.

DESCRIPTOR: *EFFLUENTS; *MAINTENANCE; *OPERATIONS (WASTEWATER); *ONSITE WASTEWATER TREATMENT; *PERFORMANCE EVALUATION; *PRESSURE SEWERS; *SEPTIC TANKS; *USEPA; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 131P. PRICE: $8.86

ABSTRACT: TWO AREAS PREVIOUSLY UNDOCUMENTED IN PRESSURE SEWER EVALUATIONS ARE OPERATION AND MAINTENANCE HISTORY AND SEPTIC TANK EFFLUENT TREATABILITY. NINE SITES WERE VISITED TO HIGH-LIGHT THESE CONSIDERATIONS, ESPECIALLY THEIR RELATIONSHIP TO OVERALL SYSTEM COST EFFECTIVENESS. PRESSURE SEWER SYSTEMS REQUIRE NUMEROUS SPECIALIZED COMPONENTS, EACH OF WHICH DEMAND VARYING DEGREES OF OPERATION AND MAINTENANCE. THIS REPORT CONSIDERS OPERATIONS AND MAINTENANCE FOR THE FOLLOWING: ON-LOT, MAILINE, AND TREATMENT FACILITIES. ON-LOT MAINTENANCE TASKS DIFFER FOR

THE TWO MAJOR TYPES OF SYSTEMS - GRINDER PUMP (GP) AND SEPTIC TANK EFFLUENT PUMPING (STEP). BOTH PREVENTIVE MAINTENANCE AND BREAKDOWN MAINTENANCE DUTIES WERE INVESTIGATED. OPERATION AND MAINTENANCE (O&M) TASK FREQUENCIES FOR THE NINE INVESTIGATED SYSTEMS AND DIFFERENCES BETWEEN O&M TASKS AND FREQUENCIES FOR CONTINUOUS OCCUPANCY HOMES VERSUS VACATION HOMES ARE PRESENTED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CONTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012289

PUBLICATION DATE: 85

TITLE: REVIEW OF CURRENT RBC PERFORMANCE AND DESIGN PROCEDURES.

DESCRIPTOR: ALTERNATIVE TECHNOLOGY; *DESIGN; *EQUIPMENT; FACILITIES; *LITERATURE REVIEWS; *MAINTENANCE; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *ROTATING BIOLOGICAL CONTACTORS; *SURVEYS; TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 214P. PRICE: $13.84

ABSTRACT: THE RAPID EMERGENCE OF ROTATING BIOLOGICAL CONTACTOR (RBC) TECHNOLOGY AS AN ALTERNATIVE SECONDARY WASTEWATER TREATMENT PROCESS HAS INCREASED THE NEED TO REVIEW THEIR PERFORMANCE HISTORY TO PROVIDE INFORMATION TO THE DESIGN ENGINEER. THIS STUDY, TO REVIEW AND COMPARE CURRENT DESIGN PROCEDURES WITH FIELD PERFORMANCE, WAS ACCOMPLISHED BY A REVIEW OF THE LITERATURE; EVALUATION OF PROCESS THEORY AND SYSTEM CHARACTERISTICS; FIELD SURVEY OF PLANTS AT OR NEAR DESIGN FLOWS FOR PROCESS AND EQUIPMENT PERFORMANCE, O&M REQUIREMENTS, AND POWER REQUIREMENTS; AND A COMPARISON OF DESIGN EXPECTATIONS WITH EMPIRICAL PERFORMANCE. EQUIPMENT PERFORMANCE, CENTERING ON SHAFT FAILURES AND MEDIA DETERIORATION, WAS FOUND TO BE A PROBLEM. PROCESS PERFORMANCE WAS HAMPERED DUE TO OXYGEN LIMITATION PRIMARILY IN THE FIRST STAGE, DUE TO ORGANIC OVERLOADING. FOR THE RANGE OF CONDITIONS FOUND AT THE PLANTS SURVEYED, PROCESS PERFORMANCE DID NOT MEET DESIGN PREDICTIONS FOR PERCENT BOD REMOVAL OR MASS BOD REMOVAL.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012290

PUBLICATION DATE: 85

TITLE: LIQUID WASTE COMPOSTING.

PERSONAL AUTHOR: PATTERSON, JAMES C.; SHORT, JOHN R.

DESCRIPTOR: *COMPOSTING; *COSTS; *LIQUID WASTES; *NATIONAL PARKS; *PARKS; *PERFORMANCE EVALUATION; *SLUDGE COMPOSTING; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 98P. PRICE: $6.88

ABSTRACT: THIS RESEARCH PROJECT WAS CONDUCTED AT THE CHESAPEAKE AND OHIO CANAL NATIONAL HISTORICAL PARK TO EXAMINE THE FEASIBILITY OF ADAPTING AND USING THE SLUDGE COMPOSTING TECHNIQUE TO COMPOST LIQUID WASTE COLLECTED IN NATIONAL PARKS. THIS STUDY EVALUATED THE COMPOSTING OF TWO PROBLEMATIC LIQUID RAW WASTES-SANITARY TOILET PUMPINGS AND SEPTIC TANK PUMPINGS (SEPTAGE). EFFECTIVENESS OF THE PROCESS WAS CHARACTERIZED BY MEASURING INDICATOR ORGANISM DESTRUCTION, NUTRIENT TRANSFORMATIONS, HEAVY METAL CONTENT, AND TEMPERATURE AND OXYGEN VARIATION. EFFECTIVE DESTRUCTION OF PATHOGENIC MICROORGANISMS WAS ACHIEVED BY TEMPERATURES IN EXCESS OF 55 DEGREES OBTAINED WITHIN THE COMPOSTING PILE. THE SYSTEM WAS COSTLY ON A UNIT VOLUME BASIS, BUT COSTS WERE REASONABLE WHEN THE VALUE OF THE COMPOST WAS CONSIDERED. THE PROCESS PROVIDED THOROUGH WASTE TREATMENT WITHOUT COSTLY EQUIPMENT AND SPECIALIZED CONSTRUCTION.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012291

PUBLICATION DATE: 85

TITLE: TECHNOLOGY ASSESSMENT OF SEQUENCING BATCH REACTORS.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *BATCH REACTORS; *COSTS; *ENERGY USE; *EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SEQUENCING BATCH REACTORS; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 99P. PRICE: $6.40

ABSTRACT: THE INNOVATIVE AND ALTERNATIVE TECHNOLOGY PROVISIONS OF THE CLEAN WATER ACT OF 1977 (PL 95-217) PROVIDE FINANCIAL INCENTIVES TO COMMUNITIES WHICH USE WASTEWATER TREATMENT ALTERNATIVES THAT REDUCE COSTS OF ENERGY CONSUMPTION OVER CONVENTIONAL SYSTEMS. SOME OF THESE TECHNOLOGIES HAVE ONLY RECENTLY BEEN DEVELOPED AND ARE NOT IN WIDESPREAD USE IN THIS COUNTRY. IN AN EFFORT TO INCREASE AWARENESS OF THE POTENTIAL BENEFITS OF SUCH ALTERNATIVES AND TO ENCOURAGE THEIR IMPLEMENTATION WHERE APPLICABLE, THE MUNICIPAL ENVIRONMENTAL RESEARCH LABORATORY HAS INITIATED THIS SERIES OF EMERGING TECHNOLOGY ASSESSMENT REPORTS. THIS DOCUMENT DISCUSSES THE APPLICABILITY AND ECONOMIC FEASIBILITY OF UTILIZING SEQUENCING BATCH REACTORS AS A VIABLE ALTERNATIVE TO CONVENTIONAL CONTINUOUS FLOW ACTIVATED SLUDGE FACILITIES FOR THE TREATMENT OF MUNICIPAL WASTEWATER.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012301

PUBLICATION DATE: 84

TITLE: HANDBOOK: IMPROVING POTW PERFORMANCE USING THE COMPOSITE CORRECTION PROGRAM APPROACH.

DESCRIPTOR: *BIOLOGICAL TREATMENT PROCESSES; *COSTS; *ECONOMICS; *HANDBOOKS; *FACILITIES; *EQUIPMENT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PERFORMANCE IMPROVEMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 267P. FREE WHILE SUPPLY LASTS.

ABSTRACT: THIS HANDBOOK PROVIDES INFORMATION ON METHODS TO ECONOMICALLY IMPROVE THE PERFORMANCE OF EXISTING PUBLICLY OWNED TREATMENT WORKS (POTWS). IT IS 'HOW-TO' ORIENTED AND DESCRIBES AN APPROACH THAT POTW OWNERS CAN USE TO ACHIEVE IMPROVEMENTS IN TREATMENT WITHOUT MAJOR CAPITAL EXPENDITURES. THE APPROACH CONSISTS OF AN EVALUATION PHASE AND A PERFORMANCE IMPROVEMENT PHASE. THIS HANDBOOK FOCUSES ON POTWS TREATING TYPICAL MUNICIPAL WASTEWATER COMPATIBLE WITH COMMON BIOLOGICAL WASTEWATER TREATMENT PROCESSES. IT HAS BEEN WRITTEN MAINLY FOR POTWS WITH FLOWS UP TO ABOUT 40,000 CUBIC METERS/DAY (10 MGD), WHICH INCLUDES OVER 95 PERCENT OF EXISTING POTWS IN THE UNITED STATES. THE SCOPE OF THE HANDBOOK IS FURTHER FOCUSED ON MECHANICAL PLANTS USING ACTIVATED SLUDGE (SUSPENDED GROWTH), TRICKLING FILTERS (FIXED FILM), AND VARIATIONS OF THESE PROCESSES FOR SECONDARY TREATMENT.

AVAILABILITY: USEPA, CENTER FOR ENVIRONMENTAL RESEARCH INFORMATION, CINCINNATI, OH 45268

IRIS ACCESSION NUMBER: EW012302

PUBLICATION DATE: 82

TITLE: HANDBOOK: IDENTIFICATION AND CORRECTION OF TYPICAL DESIGN DEFICIENCIES AT MUNICIPAL WASTEWATER TREATMENT FACILITIES.

DESCRIPTOR: *COSTS; *DESIGN; *FACILITIES; *HANDBOOKS; *MAINTENANCE; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PERFORMANCE IMPROVEMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 420P. FREE WHILE SUPPLY LAST.

ABSTRACT: THIS HANDBOOK HAS BEEN PREPARED FOR USE BY ENGINEERS INVOLVED IN THE DESIGN AND REVIEW OF DESIGNS FOR POTWS. ITS INTENT IS TO IDENTIFY DESIGN DEFICIENCIES FOUND TO LIMIT THE PERFORMANCE OF POTWS. DESIGN CONSIDERATIONS HAVE BEEN DEVELOPED THAT WILL ELIMINATE THESE DEFICIENCIES DURING THE DESIGN PHASES OF THE PROJECT. THE DOCUMENT WILL PROVE USEFUL TO PERSONNEL INVOLVED IN THE OPERATION AND MAINTENANCE OF POTWS SINCE PROCEDURES ARE PRESENTED, WHERE FEASIBLE, FOR CORRECTION OF DESIGN DEFICIENCIES AT EXISTING FACILITIES. USE OF THE HANDBOOK WILL ASSURE THAT THE DESIGN INCORPORATES A MAXIMUM NUMBER OF OPERATIONAL CONVENIENCES. THE HANDBOOK DESCRIBES DESIGN DEFICIENCIES THAT CONTRIBUTE TO PERFORMANCE AND RELIABILITY PROBLEMS, POOR SAFETY PRACTICES, AND/OR DECREASED FLEXIBILITY OF PLANT PROCESS

CONTROL. THE RESULT OF SUCH DEFICIENCIES MAY BE ANY COMBINATION OF INCREASED PLANT OPERATIONS AND MAINTENANCE, COST, AND ENERGY REQUIREMENTS.

AVAILABILITY: USEPA, CENTER FOR ENVIRONMENTAL RESEARCH INFORMATION, CINCINNATI, OH 45268

IRIS ACCESSION NUMBER: EW012304

PUBLICATION DATE: 84

TITLE: THERMAL TREATMENT OF MUNICIPAL SEWAGE SLUDGES. PROJECT SUMMARY.

PERSONAL AUTHOR: LEBRUN, THOMAS J.; TORTORICI, LIBERATO D.

DESCRIPTOR: *CALIFORNIA; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PILOT STUDIES; *RESEARCH REPORTS; *SLUDGE; *THERMAL CONDITIONING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: PRICE CODE: PB84-196732. COST: $20.50

ABSTRACT: A RESEARCH PROGRAM ON THE THERMAL CONDITIONING OF SLUDGE WAS CONDUCTED FOR THE LOS ANGELES AND ORANGE COUNTY METROPOLITAN AREAS. THE MAJOR GOAL OF THE STUDY WAS TO INVESTIGATE THE ADVANTAGES OF THE THERMAL CONDITIONING OF PRIMARY AND WASTE-ACTIVATED SLUDGES BEFORE ANAEROBIC DIGESTION ON A CONTINUOUS-FLOW AND PILOT-SCALE BASIS. CONCLUSIONS ARE PRESENTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012305

PUBLICATION DATE: 84

TITLE: STORMWATER MANAGEMENT MODEL USER'S MANUAL VERSION III. PROJECT SUMMARY.

PERSONAL AUTHOR: HUBER, WAYNE C.; AND OTHERS

DESCRIPTOR: *COMPUTER APPLICATIONS; *MANUALS; *MANAGEMENT; *MODELS; *PLANNING; *SIMULATIONS; *STORMWATER; *SURFACE RUNOFF; *URBAN AREAS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: ORDER NO.: PB84-198423. COST: $38.50

ABSTRACT: A DESCRIPTION IS GIVEN OF THE THIRD UPDATE OF A USER'S MANUAL FOR THE U.S. EPA STORM WATER MANAGEMENT MODEL (SWMM). THE SWMM IS A COMPREHENSIVE MATHEMATICAL MODEL DEVELOPED FOR BOTH CONTINUOUS AND SINGLE EVENT SIMULATION OF URBAN RUNOFF QUANTITY AND QUALITY IN STORM AND COMBINED SEWER SYSTEMS. ALL ASPECTS OF THE URBAN HYDROLOGIC AND QUALITY CYCLES ARE SIMULATED, INCLUDING SURFACE RUNOFF, TRANSPORT THROUGH THE DRAINAGE NETWORK, STORAGE AND TREATMENT, AND RECEIVING WATER EFFECTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012306

PUBLICATION DATE: 84

TITLE: WASTES FROM MANUFACTURE OF DYES AND PIGMENTS. PROJECT SUMMARIES.

PERSONAL AUTHOR: BOMBERGER, DAVID C.; AND OTHERS

DESCRIPTOR: *CHEMICALS; *DYES; *INDUSTRY; *INDUSTRIAL WASTES; *PIGMENTS; *POLLUTION CONTROL; *PRELIMINARY STUDIES; *HAZARDOUS MATERIALS; *WASTEWATER TREATMENT; *WATER DISPOSAL

DESCRIPTIVE NOTE: ORDER NO.: PB84-200864. PRICE: $79.50

ABSTRACT: A PRELIMINARY STUDY OF THE MANUFACTURE OF DYES AND PIGMENTS WAS CONDUCTED TO DETERMINE IF PROCESS WASTE STREAMS MIGHT CONTAIN HAZARDOUS MATERIALS. THE CHEMISTRY OF THE DYES AND PIGMENTS IS DISCUSSED AS WELL AS THE OVERALL PRODUCTION PROCESS AND WASTE TREATMENT PRACTICES. WASTE STREAMS THAT COULD CONTAIN HAZARDOUS MATERIAL ARE IDENTIFIED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012307

PUBLICATION DATE: 84

TITLE: EVALUATION OF URBAN RUNOFF AND COMBINED SEWER OVERFLOW MUTAGENICITY. PROJECT SUMMARY.

PERSONAL AUTHOR: SPIEGEL, STUART J.; AND OTHERS

DESCRIPTOR: *CHEMICALS; *CHEMICAL MUTAGENS; *COMBINED SEWER OVERFLOW; *RESEARCH REPORTS; *SEWERS; *SEWER OVERFLOWS; *SURFACE RUNOFF; *STORMWATER; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: ORDER NO.: PB84-211168. PRICE: $14.50

ABSTRACT: A STUDY WAS CONDUCTED TO EVALUATE COMBINED SEWER OVERFLOWS AND URBAN RUNOFF FOR THE PRESENCE OF CHEMICAL MUTAGENS. THE RESULTS INDICATED THAT URBAN RUNOFF COMPONENTS THAT PRODUCE A DETECABLE RESPONSE MAY BE DILUTED OR INACTIVATED IN COMBINATION WITH SANITARY SEWAGE TO FORM COMBINED SEWAGE.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012308

PUBLICATION DATE: 84

TITLE: PREDICTING TOXIC WASTE CONCENTRATIONS IN COMMUNITY DRINKING WATER SUPPLIES: ANALYSIS OF VULNERABILITY TO UPSTREAM INDUSTRIAL DISCH

PERSONAL AUTHOR: GOODRICH, JAMES A.; CLARK, ROBERT M.

DESCRIPTOR: CHEMICALS; *CONTAMINATION; *DRINKING WATER; *PUBLIC HEALTH; OHIO; *ORGANIC CHEMICALS; POLICIES; *SIMULATIONS; *WATER QUALITY; WEST VIRGINIA; *WATER POLLUTION CONTROL; *SYSTEMS ANALYSIS; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: ORDER NO.: PB84-206531. PRICE: $14.50

ABSTRACT: A STUDY WAS CONDUCTED TO PREDICT TOXIC WASTE CONCENTRATIONS IN COMMUNITY DRINKING WATER SUPPLIES ALONG THE OHIO AND KANAWHA RIVERS USING A WATER QUALITY SIMULATION MODEL. THE MAIN CONTRIBUTION OF THIS RESEARCH WAS THE DEVELOPMENT OF AN INTERACTIVE SYSTEMS ANALYSIS APPROACH THAT CAN AFFECT PUBLIC POLICY ON DRINKING WATER.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012310

PUBLICATION DATE: 84

TITLE: EVALUATION OF SEPTIC TANK SYSTEM EFFECTS ON GROUNDWATER QUALITY. PROJECT SUMMARY.

PERSONAL AUTHOR: CANTER, LARRY; KNOX, ROBERT C.

DESCRIPTOR: *GROUNDWATER; *LITERATURE REVIEWS; *ONSITE WASTEWATER TREATMENT; *RECOMMENDATIONS; *SEPTIC TANKS; *WASTEWATER TREATMENT; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: ORDER NO.: PB84-244441. PRICE: $29.50

ABSTRACT: THIS STUDY SUMMARIZES LITERATURE CONCERNING THE TYPES AND MECHANISMS OF GROUNDWATER POLLUTION FROM SEPTIC TANK SYSTEMS AND PROVIDES INFORMATION ON METHODOLOGIES FOR EVALUATING THE GROUNDWATER POLLUTION POTENTIAL. CONCLUSIONS AND RECOMMENDATIONS ARE PROVIDED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012311

PUBLICATION DATE: 84

TITLE: FILTRATION OF GIARDIA CYSTS AND OTHER SUBSTANCES VOLUME I: DIATOMACEOUS EARTH FILTRATION. PROJECT SUMMARY.

PERSONAL AUTHOR: LANCE, KELLY P.; AND OTHERS

DESCRIPTOR: *BACTERIA; *FILTRATION; *GIARDIA; *DRINKING WATER; *DIATOMACEOUS EARTH; *OPERATIONS (WATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WATER TREATMENT; *TURBIDITY

DESCRIPTIVE NOTE: ORDER NO.: PB84-212703. PRICE: $19.00

ABSTRACT: THIS STUDY WAS CONDUCTED TO DETERMINE THE EFFECTIVENESS OF DIATOMACEOUS EARTH FOR REMOVING GIARDIA

CYSTS, COLIFORM BACTERIA, TURBIDITY, AND PARTICLES FROM DRINKING WATER. THE RESULTS OF THIS STUDY INDICATED THAT DIATOMACEOUS EARTH IS AN EFFECTIVE MATERIAL FOR FILTRATION OF DRINKING WATER.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012312

PUBLICATION DATE: 84

TITLE: EFFECT OF PARTICLATES ON DISINFECTION OF ENTEROVIRUSES IN WATER BY CHLORAMINES.

PERSONAL AUTHOR: SCARPINO, PASQUALE V.

DESCRIPTOR: *CHLORAMINES; *DISINFECTION; *COLIFORMS; *ENTEROVIRUSES; *PERFORMANCE EVALUATION; *RECOMMENDATIONS; *RESEARCH REPORTS; *WATER TREATMENT; *WASTEWATER TREATMENT; *VIRUSES

DESCRIPTIVE NOTE: ORDER NO.: PB84-190693. PRICE: $11.50

ABSTRACT: THE INACTIVATION KINETICS OF CHLORAMINES ON ENTEROVIRUS, POLIO VIRUS 1, AND ON AN ENTERIC INDICATOR OF FECAL POLLUTION WERE EXAMINED IN LABORATORY STUDIES. CONCLUSIONS AND RECOMMENDATIONS ARE REPORTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012323

PUBLICATION DATE: 75

TITLE: PROCESS DESIGN MANUAL FOR NITROGEN CONTROL.

DESCRIPTOR: CONTROLS; *CONTROL TECHNOLOGY; *DESIGN MANUALS; DESIGN; EQUIPMENT; FACILITIES; MANUALS; *OPERATIONS (WASTEWATER); *NITROGEN; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 438P. FREE WHILE SUPPLY LASTS.

ABSTRACT: THIS MANUAL PRESENTS THEORETICAL AND PROCESS DESIGN CRITERIA FOR THE IMPLEMENTATION OF NITROGEN CONTROL TECHNOLOGY IN MUNICIPAL WASTEWATER TREATMENT FACILITIES AS OF 1975. DESIGN CONCEPTS ARE EMPHASIZED AS MUCH AS POSSIBLE THROUGH EXAMINATION OF DATA FROM FULL-SCALE AND PILOT INSTALLATIONS. DESIGN DATA ARE INCLUDED ON BIOLOGICAL NITRIFICATION, BREAKPOINT CHLORINATION, ION EXCHANGE, AND AIR STRIPPING. ONE CHAPTER PRESENTS THE CONCEPTS INVOLVED IN ASSEMBLING VARIOUS UNIT PROCESSES INTO RATIONAL TREATMENT TRAINS AND PRESENTS ACTUAL CASE EXAMPLES OF SPECIFIC TREATMENT SYSTEMS THAT INCORPORATE NITROGEN CONTROL PROCESSES.

AVAILABILITY: USEPA, TECHNOLOGY TRANSFER, 26 WEST ST. CLAIR, CINCINNATI, OH 45268

IRIS ACCESSION NUMBER: EW012325

PUBLICATION DATE: 84

TITLE: CONTROLLING WASTEWATER TREATMENT PROCESSES. SAVE MONEY AVOID PROBLEMS.

PERSONAL AUTHOR: CORTINOVIS, DAN

DESCRIPTOR: *BIOLOGICAL TREATMENT; *CHEMICAL TREATMENT; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *PHYSICAL TREATMENT; *POSTSECONDARY EDUCATION; *TRAINING; *UNIT PROCESSES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 150P. PRICE: $14.95 PLUS $1.00 SHIPPING CHARGES. QUANTITY DISCOUNTS AVAILABLE.

ABSTRACT: THIS IS A PRACTICAL GUIDE FOR WASTEWATER TREATMENT PERSONNEL. COMPLEX PROCESS OPERATIONS ARE EXPLAINED IN SIMPLE LANGUAGE. THE MANUAL COVERS BIOLOGICAL, CHEMICAL, AND PHYSICAL TREATMENT PROCESSES, AND RELATED TOPICS SUCH AS COMPUTER APPLICATIONS AND ENERGY CONSERVATION. PHOTOS, DIAGRAMS, AND WORKED-OUT EXAMPLES MAKE IT USEFUL FOR TRAINING PROGRAMS.

AVAILABILITY: RIDGELINE PRESS, 1136-C ORCHARD ROAD, LAFAYETTE, CA 94549

IRIS ACCESSION NUMBER: EW012326

PUBLICATION DATE: 85

TITLE: PASS YOUR WASTEWATER OPERATOR EXAMS.

PERSONAL AUTHOR: CORTINOVIS, DAN

DESCRIPTOR: *CERTIFICATION; *EXAMINATIONS; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POSTSECONDARY EDUCATION; *OPERATORS; *STUDY MANUALS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 60P. PRICE: $9.95 PLUS $1.00 SHIPPING CHARGES. QUANTITY DISCOUNTS AVAILABLE.

ABSTRACT: THIS STUDY MANUAL CONTAINS IMPORTANT FACTS, FIGURES, AND FORMULAS NEEDED FOR ALL LEVELS OF JOB AND CERTIFICATION EXAMS. THE INFORMATION IS ARRANGED IN A TABULAR FORMAT FOR INSTANT-FEEDBACK STUDYING. ALSO INCLUDED ARE PRACTICE PROBLEMS AND ORDERING INFORMATION FOR THE PUBLICATIONS USED TO MAKE THE EXAMS.

AVAILABILITY: RIDGELINE PRESS, 1136-C ORCHARD ROAD, LAFAYETTE, CA 94549

IRIS ACCESSION NUMBER: EW012328

PUBLICATION DATE: 84

TITLE: WORLD INDUSTRY CONFERENCE ON ENVIRONMENTAL MANAGEMENT (WICEM). OUTCOMES AND REACTIONS.

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *COSTS; *ENVIRONMENT; *ENVIRONMENTAL EFFECTS; *INDUSTRY; *ISSUES; *MANAGEMENT; *PLANNING; *POLICIES; *POLLUTION CONTROL; *RECOMMENDATIONS; *REGULATIONS; *TRENDS; *UNESCO; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 42P. PRICE: $10.00

ABSTRACT: THIS PUBLICATION REPORTS THE PROCEEDINGS OF THE FIRST WORLD INDUSTRY CONFERENCE ON ENVIRONMENTAL MANAGEMENT (WICEM) WHICH TOOK PLACE IN VERSAILLES IN NOV, 1984. SECTIONS IN THE PUBLICATION INCLUDE (1) THE WICEM AGENDA, (2) WICEM AT WORK, AND (3) BEYOND WICEM.

AVAILABILITY: INDUSTRY AND ENVIRONMENT OFFICE, UNITED NATIONS ENVIRONMENT PROGRAMME, 17 RUE MARGVERITTE, 75017 PARIS, FRANCE

IRIS ACCESSION NUMBER: EW012329

PUBLICATION DATE: 85

TITLE: IMPLEMENTATION OF THE FEDERAL CLEAN WATER ACT. MAY 23, 1984. (MANAGEMENT OF THE CONSTRUCTION GRANTS PROGRAM AAD THE ELK PINCH AND

DESCRIPTOR: *CLEAN WATER ACT; *CONGRESSIONAL HEARINGS; *CONSTRUCTION GRANTS PROGRAM; *COSTS; *FACILITIES; *FINANCING; *MANAGEMENT; *USEPA; *WASTEWATER TREATMENT; *WEST VIRGINIA

DESCRIPTIVE NOTE: 214P.

ABSTRACT: THIS PUBLICATION PRESENTS THE CONGRESSIONAL HEARINGS REGARDING THE MANAGEMENT OF THE CONSTRUCTION GRANTS PROGRAM AND TWO WASTEWATER TREATMENT PROJECTS IN WEST VIRGINIA. ALSO INCLUDED ARE MATERIALS PRESENTED FOR TESTIMONY.

AVAILABILITY: US GOVERNMENT PRINTING OFFICE, WASHINGTON, DC

IRIS ACCESSION NUMBER: EW012330

PUBLICATION DATE: 84

TITLE: IMPLEMENTATION OF THE FEDERAL CLEAN WATER ACT. (EPA ENFORCEMENT OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM PERMIT PROG

DESCRIPTOR: *COMPLIANCE; *CLEAN WATER ACT; *CONGRESSIONAL HEARINGS; *COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION; *ENFORCEMENT; *FEDERAL ROLE; *MONITORING; *REGULATIONS; *STATE ROLE; *USEPA; *WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 760P.

ABSTRACT: THIS IS A COPY OF THE HEARINGS ON THE IMPLEMENTATION OF THE FEDERAL CLEAN WATER ACT HELD BEFORE THE SUBCOMMITTEE ON INVESTIGATIONS AND OVERSITE OF THE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION (U.S. HOUSE OF

REPRESENTATIVES) ON MARCH 7, 8 AND SEPT. 19, 1984. ALSO INCLUDED ARE VARIOUS PRINTED MATERIALS RECEIVED FOR THE RECORD. THE PURPOSE OF THE HEARINGS WAS TO EXAMINE THE REASONS FOR THE LACK OF COMPLIANCE OF INDUSTRIES AND MUNICIPALITIES WITH FEDERAL AND STATE POLLUTION ABATEMENT DISCHARGE PERMITS.

AVAILABILITY: US GOVERNMENT PRINTING OFFICE, WASHINGTON, DC

IRIS ACCESSION NUMBER: EW012333

PUBLICATION DATE: 78

TITLE: A COMPARISON OF OXIDATION DITCH PLANTS TO COMPETING PROCESSES FOR SECONDARY AND ADVANCED TREATMENT OF MUNICIPAL WASTES.

DESCRIPTOR: *COSTS; *DESIGN; *EQUIPMENT; *MAINTENANCE; *OPERATIONS (WASTEWATER); *OXIDATION DITCHES; *NITROGEN REMOVAL; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 211P. PRICE: $13.66

ABSTRACT: THE PURPOSE OF THIS PROJECT WAS TO PROVIDE AN IN-DEPTH ANALYSIS OF OXIDATION DITCH EQUIPMENT SPECIFICATIONS, OVERALL PROCESS PERFORMANCE AND RELIABILITY, AND A DISCUSSION OF TYPICAL DESIGN AND OPERATIONAL PROBLEMS. ALSO INCLUDED ARE CONSTRUCTION AND O&M COSTS FOR THE OXIDATION DITCH PROCESS. THESE COSTS ALONG WITH THE PERFORMANCE AND RELIABILITY DATA ARE COMPARED TO SIMILAR DATA FOR COMPETING SECONDARY BIOLOGICAL TREATMENT PROCESSES. THE CAPABILITIES OF THE OXIDATION DITCH PROCESS FOR NITROGEN REMOVAL ARE ALSO DISCUSSED. THIS INCLUDES A COMPARISON OF THE INCREMENTAL CAPITAL AND O&M COSTS OF NITROGEN REMOVAL FOR THE OXIDATION DITCH PROCESS AND OTHER BIOLOGICAL AND PHYSICAL-CHEMICAL PROCESSES. THE RESULTS OF THE REPORT INDICATE THAT OXIDATION DITCH PLANTS ARE CAPABLE OF CONSISTENTLY ACHIEVING HIGH LEVELS OF BOD AND TSS REMOVALS WITH A MINIMUM OF OPERATION. ANNUAL AVERAGE REMOVALS OF 93% FOR BOD AND 94% FOR TSS WERE FOUND. HIGH LEVELS OF NITRIFICATION (95%-99%) AND NITROGEN REMOVAL (80%) ARE ALSO POSSIBLE WITH PROPER OPERATION. COST DATA DEVELOPED IN THIS REPORT SHOWED THE TOTAL ANNUAL COSTS FOR THE OXIDATION DITCH PROCESS WERE LESS THAN THOSE FOR ALL OTHER COMPETING BIOLOGICAL PROCESSES WITHIN THE FLOW RANGE OF 0.1 TO 10.0 MGD. COST ESTIMATES WERE BASED ON 1978 DATA.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012334

PUBLICATION DATE: 83

TITLE: THE FIRST FIFTY YEARS: CHANGED LAND, CHANGED LIVES.

DESCRIPTOR: *AGRICULTURE; *AIR POLLUTION; *BIRDS; *ENERGY; *ENVIRONMENT; *FISH; *LAND USE; *NATURAL RESOURCES; *REGULATIONS; *TENNESSEE VALLY; *TRENDS; *WASTE MANAGEMENT;

*WATER POLLUTION; *WILDLIFE

DESCRIPTIVE NOTE: 212P. SINGLE COPIES AVAILABLE FREE OF CHARGE.

ABSTRACT: THIS REPORT ATTEMPTS TO PAINT A BROAD-BRUSH PICTURE OF PRESENT CONDITIONS THAT WILL SERVE AS A BENCHMARK OR FRAME OF REFERENCE FOR FUTURE ASSESSMENTS. INCLUDED ARE THE STATUS OF THE LAND, WATER, AND AIR AND THE EFFECTS OF POLLUTION OR RELATIVE PURITY ON PEOPLE, VEGETATION, WILDLIFE, BIRDS, AND FISH.

AVAILABILITY: TENNESSEE VALLY AUTHORITY, KNOXVILLE, TN

IRIS ACCESSION NUMBER: EW012336

PUBLICATION DATE: 84

TITLE: CONSTRUCTION GRANTS PROGRAM FOR MUNICIPAL WASTEWATER TREATMENT WORKS: HANDBOOK OF PROCEDURES.

DESCRIPTOR: AUDITS; DESIGN; CONSTRUCTION; *CONSTRUCTION GRANTS PROGRAM PLANNING; *FACILITIES; FUNDING; GRANTS; *GRANT PROCESSING; *HANDBOOKS; MANAGEMENT; MUNICIPALITIES; *PROCEDURES; *WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 550P. PRICE: $13.00

ABSTRACT: THIS HANDBOOK OF PROCEDURES IDENTIFIES AND EXPLAINS THE MANY PROCEDURES TO BE FOLLOWED BY PROJECT REVIEWERS AND OTHER PERSONNEL IN STATE AGENCIES AND EPA REGIONAL OFFICES WHO ARE RESPONSIBLE FOR THE CONDUCT OF THE CONSTRUCTION GRANTS PROGRAM. IT IS INTENDED TO SERVE AS A GUIDE IN PROCESSING GRANT APPLICATIONS FOR STEP 2+3 AND STEP 3 PROJECTS AS OF OCT. 1, 1984. A COMPANION DOCUMENT, "CONSTRUCTION GRANTS 1985" (CG-83), HAS BEEN WRITTEN FOR POTENTIAL GRANT APPLICANTS AND GRANTEES.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW012338

PUBLICATION DATE: 84

TITLE: PRELIMINARY PROCESSES.

DESCRIPTOR: *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POSTSECONDARY EDUCATION; *PRELIMINARY TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 64P.

ABSTRACT: THIS IS A REVISION OF AN EARLIER EDITION PUBLISHED IN 1972. THE PURPOSE AND SEQUENCE OF PRELIMINARY TREATMENT PROCESSES AND ODOR CONTROL ARE EXPLAINED IN THE FIRST SECTION OF THE MANUAL. SECTIONS II TO V DEAL WITH SCREENING AND DISINTEGRATION; GRIT REMOVAL; STORM SEWAGE; AND FLOW MEASUREMENT. IN EACH SECTION THE TREATMENT PROCESSES AND EQUIPMENT ARE DESCRIBED, EQUATIONS AND FORMULA

ARE EXPLAINED, AND THE TEXT IS SUPPORTED BY PLATES AND LINE DRAWINGS.

AVAILABILITY: INSTITUTE OF WATER POLLUTION CONTROL, LEDSON HOUSE, 53 LONDON ROAD, MAIDSTONE, KENT ME16 8JH

IRIS ACCESSION NUMBER: EW012339

PUBLICATION DATE: 83

TITLE: PROCEEDINGS OF THE ISSS SYMPOSIUM ON WATER AND SOLUTE MOVEMENT IN HEAVY CLAY SOILS.

PERSONAL AUTHOR: BOUMA, J., EDITOR

DESCRIPTOR: *CLAY SOILS; *CONFERENCE PROCEEDINGS; *FIELD METHODS; *LABORATORY METHODS; *MODELS; *SIMULATIONS; *SOIL MECHANICS; *SOILS; *SOLUTE MOVEMENT; *WATER MOVEMENT

DESCRIPTIVE NOTE: 376P. PRICE: $34.00

ABSTRACT: THIS IS THE PROCEEDINGS OF A SYMPOSIUM HELD IN AUGUST, 1984. THE TEXT HAS FOUR MAJOR PARTS: (1) DEVELOPMENT OF STRUCTURAL PATTERNS IN SWELLING AND SHRINKING CLAYS; (2) TRANSPORT PHENOMENA: WATER MOVEMENT; (3) TRANSPORT PHENOMENA: SOLUTE TRANSPORT; AND (4) MEASUREMENT AND SIMULATION TECHNIQUES.

AVAILABILITY: ILRI, P.O. BOX 45, 6700AA WAGENINGEN, THE NETHERLANDS

IRIS ACCESSION NUMBER: EW012340

PUBLICATION DATE: 84

TITLE: QSAR IN ENVIRONMENTAL TOXICOLOGY.

PERSONAL AUTHOR: KAISER, KLAUS L. E.

DESCRIPTOR: *CHEMICALS; *ENVIRONMENT; *CONFERENCE PROCEEDINGS; *HAZARDOUS MATERIALS; *ORGANIC COMPOUNDS; QSAR; *RESEARCH NEEDS; *REFERENCE MATERIALS; *TOXICOLOGY

DESCRIPTIVE NOTE: 498P. PRICE: $54.50

ABSTRACT: THIS VOLUME ON QUANTITATIVE STRUCTURE-ACTIVITY RELATIONSHIPS (QSAR) IN ENVIRONMENTAL TOXICOLOGY PROVIDES PRIMARY SCIENTIFIC DATA ON SPECIFIC TOPICS AS WELL AS OVERVIEWS OF BROADER QUESTIONS OF INTERRELATIONS OF PARAMETERS. SUBJECTS COVERED INCLUDE QSAR OF AZAARENES, AROMATIC AMINES, CHLOROANILINES, BENZENES, BIPHENYLS, PHENOLS, AND HYDROCARBONS, NON-ELECTROLYTE HERBICIDES, PARASUBSTITUTED PHENOLS, OILS, AND OTHER COMPOUNDS WITH A VARIETY OF AQUATIC AND TERRESTRIAL SPECIES.

AVAILABILITY: D. REIDEL PUBLISHING COMPANY, P.O. BOX 17, 3300AA DORDRECHT, THE NETHERLANDS

IRIS ACCESSION NUMBER: EW012341

PUBLICATION DATE: 84

TITLE: MANUAL FOR SPILLS OF HAZARDOUS MATERIALS.

DESCRIPTOR: *CHEMICALS; *ENVIRONMENT; *GUIDES; *HAZARDOUS MATERIALS; *CONTAINMENT; *RESPONSE STRATEGIES; *REFERENCE MATERIALS; *SPILLS; *WASTE TREATMENT; *WASTE DISPOSAL; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: PRICE: US $22.75; CANADA $18.95

ABSTRACT: THIS MANUAL PROVIDES INFORMATION ABOUT CHEMICAL SUBSTANCES CONSIDERED HAZARDOUS UPON SPILLAGE. INFORMATION IS INCLUDED ON CONTROL, CONTAINMENT, DISPOSAL AND TREATMENT FOR CONTAMINATION. DATA ARE INCLUDED ON CHEMICAL AND PHYSICAL PROPERTIES, FIRE PROPERTIES, HUMAN HEALTH AND TOXICITY, AND REACTIVITY AND ENVIRONMENTAL TOXICITY.

AVAILABILITY: CANADIAN GOVERNMENT PUBLISHING CENTER, TECHNICAL SERVICE BRANCH, ENVIRONMENT CANADA

IRIS ACCESSION NUMBER: EW012347

PUBLICATION DATE: 83

TITLE: LEACHATE TREATMENT, 1977-MARCH 1983 (CITATIONS FROM THE SELECTED WATER RESOURCES ABSTRACTS DATA BASE).

DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *LANDFILLS; *LEACHATE; *LEACHATE TREATMENT; *OPERATIONS (WASTEWATER); *WASTE DISPOSAL; *WATER QUALITY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 139P. PRICE CODE: PC A01/MF A01. ORDER NO.: PB83-837030/WEP

ABSTRACT: THIS BIBLIOGRAPHY CONTAINS CITATIONS CONCERNING TREATABILITY STUDIES ON LEACHATE FROM LANDFILLS AND SOLID WASTE DISPOSAL SITES. BIOLOGICAL TREATMENT, CHEMICAL COAGULATION, CARBON ADSORPTION, RESIN ADSORPTION, MEMBRANE PROCESSES, AND STRIPPING ARE AMONG THE TREATMENT PROCESSES DISCUSSED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 126 CITATIONS, 61 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012348

PUBLICATION DATE: 83

TITLE: FDA (FOOD AND DRUG ADMINISTRATION) PESTICIDE ANALYTICAL MANUAL, VOLUME 1.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICALS; *FEEDS; *FOODS; *FOOD AND DRUG ADMINISTRATION; *LABORATORY PROCEDURES; *LABORATORY MANUALS; *MANUALS; *PESTICIDES; *PUBLIC HEALTH; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 626P. STANDING ORDER; ORDER NO.: PB83-911899/WEP

ABSTRACT: THE FDA PESTICIDE ANALYTICAL MANUAL IS A LABORATORY MANUAL DESCRIBING METHODS FOR THE ANALYSIS OF PESTICIDE RESIDUES IN FOODS AND FEEDS. DETAILS ARE PRESENTED FOR THE METHODS USED BY FDA TO ENFORCE THE PESTICIDE TOLERANCES SET BY EPA. PERIODIC REVISIONS ARE ISSUED TO UPDATE INFORMATION, ADD NEW METHODS, OR CHANGE EXISTING SECTIONS TO REFLECT CURRENT PROCEDURES. VOLUME I GIVES COMPLETE DETAILS OF FDA MULTI-PESTICIDE RESIDUE METHODS. SAMPLE PREPARATION, GAS CHROMATOGRAPHIC OPERATING CONDITIONS, CONFIRMATORY TECHNIQUES, AND TABULATIONS OF THE ANALYTICAL BEHAVIOR OF VARIOUS CHEMICALS THROUGH EACH PROCEDURE ARE INCLUDED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012349

PUBLICATION DATE: 83

TITLE: FDA (FOOD AND DRUG ADMINISTRATION) PESTICIDE ANALYTICAL MANUAL, VOLUME 1 UPDATES.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICALS; *FEEDS; *FOODS; *FOOD AND DRUG ADMINISTRATION; *LABORATORY PROCEDURES; *LABORATORY MANUALS; *MANUALS; *PESTICIDES; *PUBLIC HEALTH; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 1P. STANDING ORDER; ORDER NO.: PB85-911800/WEP

ABSTRACT: THE FDA PESTICIDE ANALYTICAL MANUAL IS A LABORATORY MANUAL DESCRIBING METHODS FOR THE ANALYSIS OF PESTICIDE RESIDUES IN FOODS AND FEEDS. DETAILS ARE PRESENTED FOR THE METHODS USED BY FDA TO ENFORCE THE PESTICIDE TOLERANCES SET BY EPA. PERIODIC REVISIONS ARE ISSUED TO UPDATE INFORMATION, ADD NEW METHODS, OR CHANGE EXISTING SECTIONS TO REFLECT CURRENT PROCEDURES. VOLUME I GIVES COMPLETE DETAILS OF FDA MULTI-PESTICIDE RESIDUE METHODS. SAMPLE PREPARATION, GAS CHROMATOGRAPHIC OPERATING CONDITIONS, CONFIRMATORY TECHNIQUES, AND TABULATIONS OF THE ANALYTICAL BEHAVIOR OF VARIOUS CHEMICALS THROUGH EACH PROCEDURE ARE INCLUDED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012350

PUBLICATION DATE: 85

TITLE: FDA (FOOD AND DRUG ADMINISTRATION) PESTICIDE ANALYTICAL MANUAL, VOLUME 2.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICALS; *FEEDS;

*FOODS; *FOOD AND DRUG ADMINISTRATION; *LABORATORY PROCEDURES; *LABORATORY MANUALS; *MANUALS; *PESTICIDES; *PUBLIC HEALTH; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 2253P. STANDING ORDER; ORDER NO.: PB85-911999/WEP

ABSTRACT: THE FDA PESTICIDE ANALYTICAL MANUAL IS A LABORATORY MANUAL DESCRIBING METHODS FOR THE ANALYSIS OF PESTICIDE RESIDUES IN FOODS AND FEEDS. DETAILS ARE PRESENTED FOR THE METHODS USED BY FDA TO ENFORCE PESTICIDE TOLERANCES SET BY EPA. PERIODIC REVISIONS ARE ISSUED TO UPDATE INFORMATION, ADD NEW METHODS, OR CHANGE EXISTING SECTIONS TO REFLECT CURRENT PROCEDURES. VOLUME II PRESENTS METHODS FOR THE DETERMINATION OF SINGLE PESTICIDE RESIDUES MOST METHODS ARE THOSE PRESENTED BY THE PETITIONER AS PART OF THE ORIGINAL REQUEST FOR EPA REGISTRATION AND TOLERANCE. APPROPRIATE CROSS-REFERENCE TO VOLUME I ARE INCLUDED FOR THOSE CHEMICALS RECOVERED BY MULTIPLE RESIDUE PROCEDURES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012351

PUBLICATION DATE: 85

TITLE: FDA (FOOD AND DRUG ADMINISTRATION) PESTICIDE ANALYTICAL MANUAL, VOLUME 2 UPDATES.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICALS; *FOODS; *FEEDS; *FOOD AND DRUG ADMINISTRATION; *LABORATORY PROCEDURES; *LABORATORY MANUALS; *MANUALS; *PESTICIDES; *PUBLIC HEALTH; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 1P. STANDING ORDER; ORDER NO.: PB85-911998/WEP

ABSTRACT: THE FDA PESTICIDE ANALYTICAL MANUAL IS A LABORATORY MANUAL DESCRIBING METHODS FOR THE ANALYSIS OF PESTICIDE RESIDUES IN FOODS AND FEEDS. DETAILS ARE PRESENTED FOR THE METHODS USED BY FDA TO ENFORCE THE PESTICIDE TOLERANCES SET BY EPA. PERIODIC REVISIONS ARE ISSUED TO UPDATE INFORMATION, ADD NEW METHODS, OR CHANGE EXISTING SECTIONS TO REFLECT CURRENT PROCEDURES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012352

PUBLICATION DATE: 85

TITLE: FDA (FOOD AND DRUG ADMINISTRATION) PESTICIDE ANALYTICAL MANUAL, VOLUMES 1 AND 2.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICALS; *FEEDS; *FOODS; *FOOD AND DRUG ADMINISTRATION; *LABORATORY PROCEDURES; *LABORATORY MANUALS; *MANUALS; *PESTICIDES; *PUBLIC HEALTH; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 2253P. STANDING ORDER; ORDER NO.: PB85-911799/WEP

ABSTRACT: THE FDA PESTICIDE ANALYTICAL MANUAL IS A LABORATORY MANUAL DESCRIBING METHODS FOR THE ANALYSIS OF PESTICIDE RESIDUES IN FOODS AND FEEDS. DETAILS ARE PRESENTED FOR THE METHODS USED BY FDA TO ENFORCE PESTICIDE TOLERANCES SET BY EPA. PERIODIC REVISIONS ARE ISSUED TO UPDATE INFORMATION, ADD NEW METHODS, OR CHANGE EXISTING SECTIONS TO REFLECT CURRENT PROCEDURES. VOLUME I GIVES COMPLETE DETAILS OF FDA MULTI-PESTICIDE RESIDUE METHODS, SAMPLE PREPARATION, GAS CHROMATOGRAPHIC OPERATING CONDITIONS, CONFIRMATORY TECHNIQUES, AND TABULATIONS OF THE ANALYTICAL BEHAVIOR OF VARIOUS CHEMICALS THROUGH EACH PROCEDURE ARE INCLUDED. VOLUME II PRESENTS METHODS FOR THE DETERMINATION OF SINGLE PESTICIDE RESIDUES. MOST METHODS ARE THOSE PRESENTED BY THE PETITIONER AS PART OF THE ORIGINAL REQUEST FOR EPA REGISTRATION AND TOLERANCE. APPROPRIATE CROSSREFERENCE TO VOLUME I ARE INCLUDED FOR THOSE CHEMICALS RECOVERED BY MULTIPLE RESIDUE PROCEDURES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012353

PUBLICATION DATE: 85

TITLE: OPTIMIZATION OF NITROGEN REMOVAL BY RAPID INFILTRATION. VOLUME 2. REMOTE COMPUTER OPERATING SYSTEM.

PERSONAL AUTHOR: WALTERS, D. M.; AND OTHERS

DESCRIPTOR: *COLORADO; *COMPUTER APPLICATIONS; *INFILTRATION; *LAND TREATMENT; *NITROGEN; *OPERATIONS (WASTEWATER); *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 336P. PRICE CODE: PC A15/MF A01. ORDER NO.: PB85-173946/WEP

ABSTRACT: A RAPID INFILTRATION MUNICIPAL WASTEWATER LAND TREATMENT SYSTEM USING TWO INFILTRATION BEDS WAS REMOTELY CONTROLLED IN BOULDER, COLORADO, UTILIZING TELECOMMUNICATION FROM THE U.S. ENVIRONMENTAL PROTECTION AGENCY, ROBERT S. KERR ENVIRONMENTAL RESEARCH LABORATORY IN ADA, OKLAHOMA, WITH A 16-BIT COMPUTER SYSTEM. OPERATION OF THE SYSTEM REQUIRED UNIQUE INTERFACING OF A PDP1123 COMPUTER SYSTEM WITH A DATA COLLECTION SYSTEM AND SIGNAL CONDITIONING SYSTEM. WHEN THIS HARD WARE WAS INTEGRATED TOGTHER, IT ALLOWED DATA TO BE COLLECTED AT BOULDER, COLORADO, AND THE RESULTS TRANSMITTED TO THE R.S.K.E.R.L. IN ADA, OKLAHOMA, WHERE COMPUTER PROGRAMS ANALYZED THE DATA AND TRANSMITTED CODES BACK TO BOULDER TO OPERATE THE SYSTEM AS DESIRED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012354

PUBLICATION DATE: 83

TITLE: TECHNOLOGY ASSESSMENT OF SEQUENCING BATCH REACTORS.

PERSONAL AUTHOR: IRVINE, R. L.

DESCRIPTOR: *ACTIVATED SLUDGE; *BATCH REACTORS; *COSTS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 82P. PRICE CODE: PC A05/MF A01. ORDER NO.: PB83-167245/WEP

ABSTRACT: THE INNOVATIVE AND ALTERNATIVE TECHNOLOGY PROVISIONS OF THE CLEAN WATER ACT OF 1977 (PL 95-217) PROVIDE FINANCIAL INCENTIVES TO COMMUNITIES WHICH USE WASTEWATER TREATMENT ALTERNATIVES THAT REDUCE COSTS OF ENERGY CONSUMPTION OVER CONVENTIONAL SYSTEMS. SOME OF THESE TECHNOLOGIES HAVE BEEN ONLY RECENTLY DEVELOPED AND ARE NOT IN WIDESPREAD USE IN THIS COUNTRY. IN AN EFFORT TO INCREASE AWARENESS OF THE POTENTIAL BENEFITS OF SUCH ALTERNATIVES AND TO ENCOURAGE THEIR IMPLEMENTATION WHERE APPLICABLE, THE MUNICIPAL ENVIRONMENTAL RESEARCH LABORATORY HAS INITIATED THIS SERIES OF EMERGING TECHNOLOGY ASSESSMENT REPORTS. THIS DOCUMENT DISCUSSES THE APPLICABILITY AND ECONOMIC FEASIBILITY OF UTILIZING SEQUENCING BATCH REACTORS AS A VIABLE ALTERNATIVE TO CONVENTIONAL CONTINUOUS FLOW ACTIVATED SLUDGE FACILITIES FOR THE TREATMENT OF MUNICIPAL WASTEWATER.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012355

PUBLICATION DATE: 84

TITLE: FILAMENTOUS AND ZOOGLEAL BULKING IN ACTIVATED SLUDGE SYSTEMS: INTERNATIONAL WORKSHOP.

PERSONAL AUTHOR: IRVINE, R. L.

DESCRIPTOR: *ACTIVATED SLUDGE; *BULKING; *FILAMENTOUS ORGANISMS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SLUDGE; *WASTEWATER TREATMENT; *WORKSHOPS

DESCRIPTIVE NOTE: 63P. PRICE CODE: PC A04/MF A01. ORDER NO.: PB83-167088/WEP

ABSTRACT: SIXTY-SEVEN PERCENT OF EXISTING WASTEWATER TREATMENT PLANTS AND OVER 80 PERCENT OF THOSE UNDER CONSTRUCTION AND PROJECTED TO BE BUILT BY THE YEAR 200 ARE OF THE ACTIVATED SLUDGE TYPE. ROUGHLY 50 PERCENT OF EXISTING ACTIVATED SLUDGE FACILITIES DO NOT MEET THEIR PERMIT LIMIT FOR A NUMBER OF REASONS, INCLUDING OPERATOR AND DESIGN INADEQUACIES. IN MANY CASES, THESE INADEQUACIES HAVE RESULTED DIRECTLY FROM THE PRESENCE OF BULKING SLUDGE CAUSED BY THE PROLIFERATION OF CERTAIN FILAMENTOUS MICROORGANISMS. THIRTY-EIGHT ENGINEERS AND SCIENTISTS RESPONSIBLE FOR MUCH OF THIS RESEARCH PARTICIPATED IN A ONE-DAY WORKSHOP ON FILAMENTOUS ORGANISMS. VARIOUS HYPOTHESES FOR THE GROWTH AND CONTROL OF FILAMENTS WERE DISCUSSED AND RESEARCH NEEDS WERE SUMMARIZED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012356

PUBLICATION DATE: 85

TITLE: DISEASES CAUSED BY WATER CONTACT.

PERSONAL AUTHOR: DUFOUR, A. P.

DESCRIPTOR: *ANIMAL WASTES; *DISEASES; *ENVIRONMENT; *PUBLIC HEALTH; *SEWAGE; *WATER

DESCRIPTIVE NOTE: 52P. PRICE CODE: PC A04/MF A01. ORDER NO.: PB85-164929/WEP

ABSTRACT: DISEASES ASSOCIATED WITH WATER CONTACT ARE REVIEWED WITH RESPECT TO THE SOURCES OF ETIOLOGICAL AGENTS, THE TYPES OF DISEASES AND THE CONDITIONS UNDER WHICH THEY OCCUR. THE SOURCES OF DISEASE AGENTS FALL INTO THREE GENERAL GROUPS; POINT SOURCES SUCH AS SEWAGE TREATMENT PLANTS; DISPERSED SOURCES RELATED TO ANIMAL WASTES; AND THE WATER ENVIRONMENT ITSELF. DISEASES ASSOCIATED WITH BACTERIA INDIGENOUS TO THE WATER ENVIRONMENT WERE NOTABLE BECAUSE EXPOSED INDIVIDUALS WHO BECAME ILL WERE INVARIABLY COMPROMISED IN SOME WAY. RISK OF DISEASE DUE TO POINT SOURCES OF POLLUTION CAN BE MINIMIZED THROUGH SEWAGE TREATMENT AND DISINFECTION, WHEREAS RISK OF DISEASE DUE TO ANIMAL CONTAMINATION OR BACTERIA NATIVE TO WATER ENVIRONMENTS CAN BE MINIMIZED ONLY BY AVOIDING EXPOSURE SITUATIONS AND BY PUBLIC HEALTH EDUCATION MEASURES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012357

PUBLICATION DATE: 84

TITLE: ORGANICS CONTAMINATION OF GROUNDWATER: AN OPEN LITERATURE REVIEW.

PERSONAL AUTHOR: STEELMAN, B. L.; AND ECKER, R. M.

DESCRIPTOR: *CHEMICALS; *CONTAMINATION; *GROUNDWATER; *LITERATURE REVIEWS; *ORGANIC COMPOUNDS; *RESEARCH REVIEWS; *WATER RESOURCES; *WATER QUALITY

DESCRIPTIVE NOTE: 13P. PRICE CODE: PC A02/MF A01. ORDER NO.: DE85003601/WEP

ABSTRACT: PACIFIC NORTHWEST LABORATORY HAS CONDUCTED AN OPEN LITERATURE REVIEW OF ORGANICS CONTAMINATION OF GROUNDWATER. THE PURPOSE OF THIS REVIEW IS TO PROVIDE THE DOE COMMUNITY WITH A BRIEF SUMMARY OF AVAILABLE FIELD DATA ON (1) THE MOST COMMONLY FOUND ORGANICS OF CONCERN IN

GROUNDWATER, (2) THE BEHAVIOR OF ORGANICS IN GROUNDWATER (E.G., TRANSPORT AND TRANSFORMATION MECHANISMS), AND (3) THE EXTENT OF DOCUMENTED ORGANICS MIGRATION FROM THE SOURCE OF CONTAMINATION. 24 REFERENCES, 2 TABLES. (ERA CITATION 10:011633)

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012358

PUBLICATION DATE: 83

TITLE: OPTIMIZATION OF NITROGEN REMOVAL BY RAPID INFILTRATION. VOLUME 1. SYSTEM DESCRIPTION AND EVALUATION.

PERSONAL AUTHOR: BENNETT, E. R.; AND OTHERS

DESCRIPTOR: *INFILTRATION; *NITROGEN; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 113P. PRICE CODE: PC A06/MF A01. ORDER NO.: PB83-173938/WEP

ABSTRACT: TREATMENT PERFORMANCE OF THREE RAPID INFILTRATION BASINS RECEIVING PRIMARY TREATED MUNICIPAL WASTEWATER IS EVALUATED FOR OPTIMUM TOTAL NITROGEN CONTROL USING A SERIES OF MANUAL OPERATIONAL TECHNIQUES AND BY REMOTE CONTROL COMPUTER OPERATION. THREE TYPES OF LOADING SEQUENCES WERE USED; FLOOD LOADING EVERY THREE AND ONE-HALF DAYS, FLOODING DAILY AND SPRINKLER SYSTEM LOADING BASED ON SOIL MOISTURE SENSORS AND COMPUTER ANALYSIS AND CONTROL. THE INFLUENT AND EFFLUENT QUALITY VARIATIONS WERE INCREASED SUBSTANTIALLY COMPARED WITH PREVIOUS STUDIES. UNDER OPTIMUM CONDITIONS, SUSTAINED REMOVALS ABOVE SEVENTY-FIVE PERCENT WERE ACHIEVED WITH VALUES FOR INDIVIDUAL WEEKS IN THE MID-EIGHTY PERCENT RANGE. NITROGEN REMOVALS WERE SOMEWHAT LESS FOR THE AUTOMATED SPRINKLER LOADED SYSTEM WITH A MAXIMUM FOUR-WEEK AVERAGE OF SIXTY-FIVE PERCENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW012359

PUBLICATION DATE: 83

TITLE: HAZARDOUS MATERIALS EMERGENCIES.

PERSONAL AUTHOR: CASHMAN, JOHN R., ED.

DESCRIPTOR: *CASE HISTORIES; *EMERGENCIES; *EQUIPMENT; *HAZARDOUS MATERIALS; *LANNING; *REFERENCE MATERIALS; *RESPONSE STRATEGIES; *TRAINING

DESCRIPTIVE NOTE: 490P. PRICE: $45.00

ABSTRACT: THIS REFERENCE PROVIDES DETAILED INFORMATION NEEDED TO PREPARE FOR AND DEAL WITH HAZARDOUS MATERIALS EMERGENCIES. TOPICS INCLUDED ARE: (1) TYPES OF EMERGENCIES; (2) RESPONSE TEAM; (3) EQUIPMENT; (4) PLANNING AND PREPARATION; (5) STRATEGIES AND TECHNIQUES; (6) CASE HISTORIES; AND (6) SELECTED REFERENCES.

AVAILABILITY: TECHNOMIC PUBLISHING COMPANY, INC., 851 NEW HOLLAND AVE., BOX 3535, LANCASTER, PA 17604

IRIS ACCESSION NUMBER: EW012360

PUBLICATION DATE: 84

TITLE: MANAGEMENT OF HAZARDOUS OCCUPATIONAL ENVIRONMENTS.

PERSONAL AUTHOR: CHEREMISINOFF, PAUL N.

DESCRIPTOR: *AIR POLLUTION; *ANALYTICAL TECHNIQUES; *BIOLOGICAL HAZARDS; *FLAMMABLE LIQUIDS; *GASES; *ENVIRONMENT; *HAZARDOUS MATERIALS; *MANAGEMENT; *LABORATORY PROCEDURES; *MONITORING; *OCCUPATIONAL HAZARDS; *RECORDKEEPING; *SAFETY

DESCRIPTIVE NOTE: 202P. PRICE: $24.95

ABSTRACT: THIS BOOK IS A PRACTICAL GUIDE FOR THE MANAGEMENT OF HAZARDOUS OCCUPATIONAL HAZARDS. CONTENTS INCLUDE: (1) DEFINING THE HAZARD; (2) EVALUATING THE HAZARD; (3) AIR SAMPLING AND MONITORING; (4) NOISE; (5) BIOLOGICAL AND INFECTIOUS HAZARDS; (6) ANALYTICAL METHODS GUIDE; (7) COMPRESSED GASES AND FLAMMABLE LIQUIDS; (8) RESPIRATORY PROTECTION; AND (9) RECORDKEEPING REQUIREMENTS.

AVAILABILITY: TECHNOMIC PUBLISHING COMPANY, INC., 851 NEW HOLLAND AVE., BOX 3535, LANCASTER, PA 17604

IRIS ACCESSION NUMBER: EW012362

PUBLICATION DATE: 84

TITLE: HAZARDOUS WASTE MANAGEMENT: IN WHOSE BACKYARD.

PERSONAL AUTHOR: HARTHILL, MICHALANN, ED.

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *INDUSTRIAL WASTES; *HAZARDOUS WASTES; *INDUSTRY; *MANAGEMENT; *LEGISLATION; *GOVERNMENT ROLE; *RECYCLING; *SITE SELECTIONS; *WASTE DISPOSAL; *WASTE TREATMENT

DESCRIPTIVE NOTE: 205P. PRICE: $22.00

ABSTRACT: THIS COLLECTION OF ESSAYS IS BASED ON A SYMPOSIUM SPONSORED BY THE AAAS COMMITTEE ON SCIENCE, ENGINEERING, AND PUBLIC POLICY HELD IN TORONTO, CANADA IN 1981. THE ESSAYS PRESENTS VARIOUS CONTROVERSIAL IDEAS THAT ATTEMPT TO RESOLVE WASTE MANAGEMENT ISSUES AND EXAMINE THE ROLES OF INDUSTRY, GOVERNMENT, AND THE PUBLIC.

AVAILABILITY: WESTVIEW PRESS, BOULDER, CO

IRIS ACCESSION NUMBER: EW012363

PUBLICATION DATE: 83

TITLE: FUNDAMENTALS OF AQUATIC TOXICOLOGY.

PERSONAL AUTHOR: RAND, G. M., AND PETROCELLI, S. R.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *AQUATIC TOXICOLOGY; *ENVIRONMENT; *INSTRUCTIONAL MATERIALS; *CHEMICALS; *POSTSECONDARY EDUCATION; *TOXICOLOGY; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 666P. PRICE: $69.95 CLOTH, $39.95 PAPER.

ABSTRACT: THIS VOLUME, DESIGNED TO BE USED AS A TEXTBOOK FOR COURSES IN AQUATIC AND ENVIRONMENTAL TOXICOLOGY, PRESENTS A DESCRIPTION OF BASIC CONCEPTS AND TEST METHODS EMPLOYED IN AQUATIC TOXICOLOGY STUDIES. THE TOPICS DISCUSSED INCLUDE THE BASIC CONCEPTS AND METHODOLOGIES USED IN AQUATIC TOXICITY TESTING, THE UTILITY OF SUBLETHAL EFFECTS TESTING IN EVALUATING THE LESS OBVIOUS EFFECTS OF CHEMICAL EXPOSURE ON AQUATIC ORGANISMS, AND THE DISTRIBUTION AND FATE OF CHEMICALS IN THE AQUATIC ENVIRONMENT. ALSO INCLUDED IS A GLOSSARY OF AQUATIC TOXICOLOGY TERMINOLOGY.

AVAILABILITY: HEMISPHERE PUBLISHING CORP., 79 MADISON AVE., NEW YORK, NY 10016

IRIS ACCESSION NUMBER: EW012364

PUBLICATION DATE: 83

TITLE: CHLORINATED DIOXINS AND DIBENZOFURANS IN THE TOTAL ENVIRONMENT.

PERSONAL AUTHOR: KEITH, L. H.; AND OTHERS

DESCRIPTOR: *CHLORINATED DIOXINS; *DIOXINS; *ANALYTICAL TECHNIQUES; *DIBENZOFURANS; *ENVIRONMENT; *PUBLIC HEALTH; *SAMPLING; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 540P. PRICE: $59.95

ABSTRACT: THIS PUBLICATION IS AN OUTGROWTH OF A 1983 SYMPOSIA SPONSORED BY THE AMERICAN CHEMICAL SOCIETY IN WASHINGTON, D.C. THE CHLORINATED DIOXINS ARE CONSIDERED FROM VARIOUS PERSPECTIVES. INFORMATION IS INCLUDED IN SUCH AREAS AS THE FORMATION AND OCCURENCE OF DIOXINS AND DIBENZOFURANS, SAMPLING AND ANALYSIS, HUMAN TOXICOLOGY, GENERAL EXPOSURE CONSIDERATIONS, AND CONTROL AND DECONTAMINATION MEASURES.

AVAILABILITY: BUTTERWORTH PUBLISHERS, 80 MONTVALE AVE., STONEHAME, MA 02180

IRIS ACCESSION NUMBER: EW012366

PUBLICATION DATE: 83

TITLE: SLURRY TRENCH CONSTRUCTION FOR POLLUTION MIGRATION CONTROL.

PERSONAL AUTHOR: SPOONER, P.

DESCRIPTOR: *CONSTRUCTION; *COSTS; *MONITORING; *POLLUTION CONTROL; *SLURRY WALLS; *SLURRY TRENCHES; *WATER POLLUTION CONTROL; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 237P. PRICE: $36.00

ABSTRACT: THIS PUBLICATION PROVIDES BACKGROUND INFORMATION FOR THE EVALUATION OF POLLUTION MIGRATION CONTROL BY SLURRY WALLS, CONSTRUCTION TECHNIQUES, AND COST DATA. THE PROCEDURES FOR PLANNING A SLURRY WALL INSTALLATION ARE GIVEN, ALONG WITH THE FACTORS CONSIDERED IN SLURRY WALL DESIGN, THE NECESSARY METHODS TO MONITOR AND MAINTAIN A COMPLETED SLURRY WALL, AND A SERIES OF EVALUATION CRITERIA THAT CORRESPOND TO THE STAGES OF A SLURRY WALL INSTALLATION.

AVAILABILITY: NOYES PUBLICATIONS, MILL RD., PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW012367

PUBLICATION DATE: 85

TITLE: ELECTROPLATING WASTEWATER POLLUTION CONTROL TECHNOLOGY.

PERSONAL AUTHOR: CUSHINE, C. C. JR.

DESCRIPTOR: *COSTS; *DESIGN; *ELECTROPLATING; *FACILITIES; *INDUSTRY; *EQUIPMENT; *OPERATIONS (WASTEWATER); REFERENCE MATERIALS; *TECHNOLOGY; *WASTEWATER TREATMENT; WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 239P. PRICE: $36.00

ABSTRACT: POLLUTION CONTROL TECHNOLOGIES RELATED TO WASTEWATER GENERATED BY ELECTROPLATING OPERATIONS ARE PRESENTED. INCLUDED ARE DESIGN AND COST INFORMATION.

AVAILABILITY: NOYES PUBLICATIONS, MILL RD., PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW012368

PUBLICATION DATE: 85

TITLE: INCINERATION SYSTEMS: SELECTION AND DESIGN.

PERSONAL AUTHOR: BRUNNER, C. R.

DESCRIPTOR: *COMPLIANCE; *DESIGN; *FACILITIES; *INCINERATION; *HAZARDOUS WASTES; MANAGEMENT; OPERATIONS; PLANNING; *SLUDGE; *SOLID WASTES

DESCRIPTIVE NOTE: 417P. PRICE: $52.50

ABSTRACT: PROVIDED ARE GUIDELINES FOR DESIGNING FACILITIES

FOR CENTRAL DISPOSAL SYSTEMS, SLUDGE INCINERATION, ON-SITE SOLID WASTE DISPOSAL, HAZARDOUS WASTE INCINERATION, AND AIR EMISSIONS CONTROL SYSTEMS, AND OTHERS. METHODS ARE PROVIDED FOR CALCULATING DESIGN AND OPERATING PARAMETERS FOR MOST TYPES OF INCINERATION, AND INFORMATION FOR REDUCING THE DELAYS AND FINES IS GIVEN.

AVAILABILITY: VAN NOSTRAND REINHOLD MAIL ORDER SERVICE, 7625 EMPIRE DR., FLORENCE, KY 41042

IRIS ACCESSION NUMBER: EW012369

PUBLICATION DATE: 85

TITLE: TOXIC SUBSTANCE STORAGE TANK CONTAINMENT.

PERSONAL AUTHOR: ECOLOGY AND ENVIRONMENT, INC., ET AL.

DESCRIPTOR: COMPLIANCE; *CONTAINMENT; CHEMICALS; *GUIDELINES; INSPECTION; MAINTENANCE; SAFETY; *STORAGE TANKS; STANDARDS; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 274P. PRICE: $36.00

ABSTRACT: THIS GUIDE PROVIDES GUIDELINES FOR A TOXIC SUBSTANCE STORAGE TANK CONTAINMENT ASSURANCE AND SAFETY PROGRAM. INFORMATION IS INCLUDED ON MAINTENANCE, INSPECTION, EMERGENCY PROCEDURES, STANDARDS, AND CODES FOR STORAGE TANK COMPLIANCE.

AVAILABILITY: NOYES PUBLICATIONS, MILL RD., PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW012370

PUBLICATION DATE: 84

TITLE: VADOSE ZONE MONITORING FOR HAZARDOUS WASTE SITE

PERSONAL AUTHOR: EVERETTS, L. G.

DESCRIPTOR: CONTAMINATION; *DISPOSAL SITES; GROUNDWATER; *HAZARDOUS WASTES; *LITERATURE REVIEWS; *MONITORING; PERFORMANCE EVALUATION; *VADOSE ZONES; *WATER QUALITY; WATER RESOURCES; WASTE DISPOSAL; SITE SELECTION; *SITE EVALUATION

DESCRIPTIVE NOTE: 338P. PRICE: $36.00

ABSTRACT: THIS DOCUMENT IS A STATE-OF-THE-ART REVIEW AND EVALUATION OF VADOSE/UNSATURATED ZONE MONITORING.

AVAILABILITY: NOYES PUBLICATIONS, MILL ROAD AT GRAND AVE., PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW012372

PUBLICATION DATE: 84

TITLE: PRINCIPLES OF WATER QUALITY.

PERSONAL AUTHOR: WAITE, THOMAS D.

DESCRIPTOR: ENGINEERING; *CHEMICALS; *CHEMICAL REACTIONS; HIGHER EDUCATION; *ENVIRONMENT; *INSTRUCTIONAL MATERIALS; *MICROBIOLOGY; PLANNING; PUBLIC HEALTH; TECHNOLOGY; *WATER QUALITY; *WATER RESOURCES; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 289P. PRICE: $45.00

ABSTRACT: THIS BOOK PRESENTS INFORMATION ON ENVIRONMENTAL PROCESSES THAT REGULATE THE MOVEMENT OF MATERIALS IN NATURAL SYSTEMS. EMPHASIS IS PLACED ON ORGANIC AND INORGANIC MATERIALS THAT RELATE TO WATER QUALITY PROBLEMS SUCH AS TOXIC METALS, ORGANIC COMPOUNDS, AND INORGANIC NUTRIENTS. ALSO INCLUDED ARE DISCUSSIONS OF ENGINEERING APPROACHES FOR IMPROVING WATER QUALITY.

AVAILABILITY: ACADEMIC PRESS, INC., PUBLISHERS, ORLANDO, FL 32887

IRIS ACCESSION NUMBER: EW012373

PUBLICATION DATE: 84

TITLE: GROUNDWATER CONTAMINATION AND EMERGENCY RESPONSE GUIDE.

PERSONAL AUTHOR: CUSWA, J. H.

DESCRIPTOR: *GROUNDWATER; *CONTAMINATION; *EMERGENCY RESPONSES; *GUIDES; *HYDROLOGY; *MONITORING; *POLLUTION CONTROL; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 490P. PRICE: $48.00

ABSTRACT: AN OVERVIEW OF GROUNDWATER HYDROLOGY; A TECHNOLOGY REVIEW OF EQUIPMENT, METHODS, AND FIELD TECHNIQUES, AND A METHODOLOGY FOR ESTIMATING GROUNDWATER CONTAMINATION UNDER EMERGENCY RESPONSE CONDITIONS ARE PROVIDED IN THIS BOOK. IT DESCRIBES VARIOUS TECHNIQUES USED TO IDENTIFY, QUANTIFY, AND RESPOND TO GROUNDWATER POLLUTION INCIDENTS.

AVAILABILITY: NOYES PUBLICATIONS, MILL ROAD AT GRAND AVE., PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW012374

PUBLICATION DATE: 85

TITLE: CHOICES.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *AUDIOVISUAL AIDS; *FILMS; *ENERGY CONSERVATION; *INSTRUCTIONAL MATERIALS;

*LANDFILLS; *LAND USE; *INCINERATION; *PUBLIC HEALTH; *SOLID WASTES; *RECYCLING; *RESOURCE RECOVERY; *WASTE DISPOSAL

DESCRIPTIVE NOTE: FILM-14 MINUTE-COLOR 16MM. PURCHASE $216.00 PLUS $4.75 HANDLING; RENTAL (ONE DAY) $40.00 PLUS $4.75 HANDLING

ABSTRACT: DISPOSING OF THE 400,000 TONS OF GARBAGE PRODUCED ANNUALLY BY BURYING IT IN LANDFILLS IS NOT THE ANSWER TO THE NATION'S GARBAGE PROBLEM. THE FILM EXAMINES CHANGES IN ONE COMMUNITY AFTER IT CHOSE TO REPLACE AN OVERBURDENED LANDFILL WITH A RESOURCE RECOVERY FACILITY TO CONVERT TRASH INTO ENERGY.

AVAILABILITY: ADELPHI PRODUCTIONS, 113 BLODGETT, ADELPHI UNIVERSITY, GARDEN CITY, NY 11530

IRIS ACCESSION NUMBER: EW012375

PUBLICATION DATE: 84

TITLE: TOXIC AND HAZARDOUS WASTES.

DESCRIPTOR: BIOLOGICAL TREATMENT; COMPLIANCE; *HAZARDOUS MATERIALS; CHEMICAL TREATMENT; *INDUSTRIAL WASTES; GROUNDWATER; METALS; *CONFERENCE PROCEEDINGS; PHYSICAL TREATMENT; RECYCLING; REGULATIONS; RESOURCE RECOVERY; SITE SELECTION; SLUDGE; WASTE DISPOSAL; *TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 537P. PRICE: $45.00 SINGLE COPY; $39.00 TWO OR MORE COPIES.

ABSTRACT: THIS PUBLICATION CONTAINS 46 REPORTS PRESENTED AT THE 16TH MID-ATLANTIC INDUSTRIAL WASTE CONFERENCE IN JUNE, 1984. SECTIONS IN THE REPORT INCLUDE THE FOLLOWING: (1) HAZARDOUS WASTE SITING CONSIDERATIONS; (2) BIOLOGICAL WASTE TREATMENT; (3) WASTE INCINERATION AND ENERGY RECOVERY; (4) INTERNATIONAL; (5) REGULATORY COMPLIANCE; (6) RECYCLE/REUSE; (7) HEAVY METALS CONTROL; (8) PHYSICAL/CHEMICAL PROCESSES; (9) SLUDGE MANAGEMENT; (10) HAZARDOUS WASTE SITE CLEANUP; AND (11) GROUNDWATER PROTECTION.

AVAILABILITY: TECHNOMIC PUBLISHING COMPANY, INC., 851 NEW HOLLAND AVE., BOX 3535, LANCASTER, PA 17604

IRIS ACCESSION NUMBER: EW012376

PUBLICATION DATE: 83

TITLE: REGIONAL AND STATE WATER RESOURCES PLANNING AND MANAGEMENT.

PERSONAL AUTHOR: CHARBENEAU, RANDALL J.; ED.

DESCRIPTOR: *CONFERENCE PROCEEDINGS; *ECONOMICS; *FINANCING; *MANAGEMENT; *PLANNING; *STATE ROLE; *TECHNOLOGY; *WATER RESOURCES

DESCRIPTIVE NOTE: 366P. PRICE: $45.00 MEMBER; $34.00 NONMEMBER

ABSTRACT: THIS PUBLICATION IS THE PROCEEDINGS OF A SYMPOSIUM HELD IN SAN ANTONIO, TEXAS. THE 51 PAPERS IN THE PUBLICATION ARE ORGANIZED INTO FIVE SECTIONS: (1) STATE PLANNING AND MANAGEMENT; (2) REGIONAL PLANNING AND MANAGEMENT; (3) PLANNING AND MANAGEMENT ISSUES; (4) ECONOMIC ANALYSIS AND FINANCING; AND (5) TECHNOLOGICAL ADVANCES AND PLANNING TOOLS.

AVAILABILITY: AWWA, 5410 GROSVENOR LANE, SUITE 220, BETHESDA, MD 20814

IRIS ACCESSION NUMBER: EW012378

PUBLICATION DATE: 84

TITLE: CHANGING ROLES FOR LOCAL AND REGIONAL GOVERNMENT IN ENVIRONMENTAL MANAGEMENT.

DESCRIPTOR: *ADMINISTRATION; *ENVIRONMENTAL PLANNING; *ENVIRONMENTAL PROBLEMS; *GOVERNMENT ROLE; *IMPACT ANALYSES; *MANAGEMENT; *PLANNING; *POLICIES; *WORLD PROBLEMS

DESCRIPTIVE NOTE: 315P.

ABSTRACT: THIS PUBLICATION IS THE PROCEEDINGS OF AN INTERNATIONAL SYMPOSIUM HELD IN THE NETHERLANDS IN 1983. THE SYMPOSIUM PROVIDED AN INTERNATIONAL FORUM TO DISCUSS THE ROLE OF LOCAL AND REGIONAL GOVERNMENTS IN ENVIRONMENTAL MANAGEMENT. PAPERS ARE GROUPED INTO THREE MAIN AREAS: (1) ENVIRONMENTAL REQUIREMENTS FROM VARIOUS PARTICIPANTS IN THE PROCESS; (2) POLICY AND PRACTICE; AND (3) NEW DEMANDS ON ADMINISTRATION AND MANAGEMENT-ORGANIZATIONAL, FINANCIAL, AND MANAGERIAL CONSEQUENCES.

AVAILABILITY: PROOST AND BRANDT DISTRIBUTION BV, STRIJKVIERTEL 69, 3454 PK DE MEERN, THE NETHERLANDS

IRIS ACCESSION NUMBER: EW012379

TITLE: CHEMICAL DETECTION OF GASEOUS POLLUTANTS.

PERSONAL AUTHOR: RUCH, WALTER E.; EDITOR

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ANNOTATED BIBLIOGRAPHIES; BIBLIOGRAPHIES; *CHEMICALS; *GASEOUS POLLUTANTS; *LABORATORY PROCEDURES; *DETECTION; *MONITORING; *POLLUTANTS; *POLLUTION CONTROL; *SAMPLING

DESCRIPTIVE NOTE: ORDER NO.: 400995. PRICE: $24.00

ABSTRACT: THIS PUBLICATION PRESENTS A BRIEF INTRODUCTION TO INDUSTRIAL GAS DETECTION METHODS AND EQUIPMENT FOLLOWED BY ABSTRACTS OF MORE THAN 1,250 ARTICLES. MOST OF THE ABSTRACTS ARE LISTED ALPHABETICALLY BY POLLUTANT DISCUSSED. THERE IS ALSO A SHORT SECTION OF ABSTRACTS ON THE TOPIC OF GASEOUS POLLUTANT DETECTION.

AVAILABILITY: TECHNOMIC PUBLISHING CO., INC., 851 NEW HOLLAND AVE, BOX 3535, LANCASTER, PA 17604

IRIS ACCESSION NUMBER: EW012382

PUBLICATION DATE: 83

TITLE: THE QUIET CRISIS.

DESCRIPTOR: *AGRICULTURE; *AUDIOVISUAL AIDS; *CONSERVATION; *FILMS; *INSTRUCTIONAL MATERIALS; *GROUNDWATER; *NATURAL RESOURCES; *POLLUTION; *WATER POLLUTION CONTROL; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: FILM 16MM-53MIN. WRITE FOR RENTAL AND PURCHASE PRICES.

ABSTRACT: THIS FILM PRESENTS A COMPREHENSIVE OVERVIEW OF THE MISMANAGEMENT OF WATER. THE FILM USES OBSERVABLE EVIDENCE AND FACTS TO SUPPORT ITS PREMISES. VARIOUS PROBLEMS ARE IDENTIFIED INCLUDING THE LARGE AMOUNT OF WATER THAT IS NOT AVAILABLE WITHOUT SUBSTANTIAL TREATMENT, DEPLETION OF WATER RESOURCES, POLLUTION OF WATER RESOURCES, AND THE IMPACT OF THE CONDITIONS ON PEOPLE, AGRICULTURE, AND WILDLIFE.

AVAILABILITY: INDIANA UNIVERSITY, AUDIO VISUAL CENTER, BLOOMINGTON, IN 47405

IRIS ACCESSION NUMBER: EW012383

PUBLICATION DATE: 81

TITLE: THE COMPTRAIN GUIDE: A MANUAL FOR EVALUATING THE PERFORMANCE OF SMALL WATER AND WASTEWATER SYSTEMS.

DESCRIPTOR: *COMPTRAIN; *EVALUATION; *GUIDES; *INSTRUCTIONAL MATERIALS; *MAINTENANCE; *MANAGEMENT; *OPERATIONS (WATER); *OPERATIONS (WASTEWATER); *OPERATOR TRAINING; *RURAL AREAS; *TRAINING; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 225P. SINGLE COPIES FREE OF CHARGE

ABSTRACT: THIS MANUAL IS INTENDED FOR NONPROJECT ORGANIZATIONS, STATE AGENCIES, AND OTHERS INTERESTED IN ESTABLISHING COMPETENCY BASED TRAINING PROGRAMS FOR PLANTS IN SMALL, RURAL COMMUNITIES (PLANTS WITH CAPACITIES OF LESS THAN THREE MILLION GALLONS A DAY). THE MANUAL COVERS BOTH WATER AND WASTEWATER. THE MANUAL IS DIVIDED INTO FOUR CHAPTERS: (1) PROJECT ORGANIZATION; (2) TARGET IDENTIFICATION; (3) PROBLEM DIAGNOSIS; AND (4) CORRECTIVE ACTION AND PROJECT EVALUATION. THERE ARE SEVERAL ATTACHMENTS CONTAINING SAMPLE FORMS, GUIDELINES, AND PROCEDURES THAT CAN BE USED IN SETTING UP AND CARRYING OUT A COMPTRAIN EFFORT.

AVAILABILITY: NATIONAL DEMONSTRATION WATER PROJECT, 1725 DESALES STREET, NW, SUITE 402, WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW012384

PUBLICATION DATE: 80

TITLE: ACCOUNTING FOR RURAL WATER SYSTEMS. A PRACTICAL APPROACH.

DESCRIPTOR: *ACCOUNTING; AUDITS; *BOOKKEEPING; CONSTRUCTION; *MANAGEMENT; *OPERATIONS (WATER); *OPERATIONS (WASTEWATER); *RECORDS; *RECORDKEEPING; *RURAL AREAS; *UTILITIES; WATER TREATMENT; WATER DISTRIBUTION; WATER RATES; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 124P. PRICE: $8.44

ABSTRACT: THIS BOOK WAS DESIGNED FOR THE MANAGER AT THE FOCAL POINT OF ANY RURAL WATER SYSTEM. INCLUDED ARE RURAL AND SMALL COMMUNITY WATER, SEWERS, AND SOLID WASTE MANAGEMENT. CHAPTERS ARE INCLUDED ON (1) CHART OF ACCOUNTS, (2) HOW TO START A BOOKKEEPING SYSTEM, (3) KEEPING THE BOOKS, (4) ASSETS, (5) LIABILITIES, (6) EQUITIES, (7) INCOME, (8) EXPENSES, (9) CONSTRUCTION, AND (10) FMHA REPORTING.

AVAILABILITY: ENVIRONMENTAL QUALITY INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW012391

PUBLICATION DATE: 85

TITLE: WATER UTILITY OPERATING DATA: AN ANALYSIS.

PERSONAL AUTHOR: SEIDEL, HARRIS F.

DESCRIPTOR: *BILLINGS; *COSTS; *MAINTENANCE; *OPERATIONS (WATER); *SURVEYS; *TRENDS; *UTILITIES; *WATER DISTRIBUTION; *WATER TREATMENT; *WATER RATES

DESCRIPTIVE NOTE: 34-41P.

ABSTRACT: THREE AWWA SURVEYS PROVIDE INFORMATION ON US WATER UTILITIES. DATA CONSIST PRIMARILY OF MEANS, MEDIANS, AND FREQUENCY DISTRIBUTIONS FOR COMMON WATER UTILITY PARAMETERS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V77 N5

IRIS ACCESSION NUMBER: EW012392

PUBLICATION DATE: 85

TITLE: THE ADVANTAGES OF DISSOLVED-AIR FLOTATION FOR WATER TREATMENT.

PERSONAL AUTHOR: ZABEL, THOMAS

DESCRIPTOR: *DESIGN; *FLOTATION; *COSTS; *OPERATIONS

(WATER); *PERFORMANCE EVALUATION; *SEDIMENTATION; *WATER TREATMENT

DESCRIPTIVE NOTE: 42-46P.

ABSTRACT: FLOTATION VERSUS SEDIMENTATION IS WEIGHED IN THIS EXAMINATION OF DESIGN, PERFORMANCE, AND COST CONSIDERATIONS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V77 N5

IRIS ACCESSION NUMBER: EW012393

PUBLICATION DATE: 85

TITLE: USES OF RECHARGE WELLS IN WATER SUPPLY.

PERSONAL AUTHOR: PETERS, JOS H.

DESCRIPTOR: *BRACKISH WATER; *CONTAMINATED WATER; *GROUNDWATER; *RECHARGE WELLS; *WATER SUPPLY; *WELLS

DESCRIPTIVE NOTE: 47-51P.

ABSTRACT: RECHARGE WELLS CAN BE USEFUL FOR REGULATING THE FLOW OF CONTAMINATED OR BRACKISH WATER AND FOR LIMITING THE CATCHMENT AREAS OF PUMPING FACILITIES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V77 N5

IRIS ACCESSION NUMBER: EW012394

PUBLICATION DATE: 85

TITLE: AN AWWA SURVEY OF INORGANIC CONTAMINANTS IN WATER SUPPLIES.

DESCRIPTOR: *CONTAMINANTS; *DRINKING WATER; *INORGANIC CONTAMINANTS; *OPERATIONS (WATER); *SURVEYS; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 67-72P.

ABSTRACT: THIS ARTICLE DOCUMENTS THE RESPONSE TO AN AWWA SURVEY INQUIRING ABOUT THE FREQUENCY AND EXTENT OF REGULATED INORGANIC CONTAMINANTS IN DRINKING WATER SUPPLIES IN THE UNITED STATES AND ITS TERRITORIES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V77 N5

IRIS ACCESSION NUMBER: EW012395

PUBLICATION DATE: 85

TITLE: IN-HOME TREATMENT METHODS FOR REMOVING VOLATILE ORGANIC CHEMICALS.

PERSONAL AUTHOR: SORRELL R. KENT; AND OTHERS

DESCRIPTOR: *CHEMICALS; *DRINKING WATER; *HOME TREATMENT METHODS; *ORGANIC CHEMICALS; *PERFORMANCE EVALUATION; *VOLATILE ORGANIC CHEMICALS; *WATER TREATMENT

DESCRIPTIVE NOTE: 72-78P.

ABSTRACT: TWO IN-HOME TREATMENT METHODS WERE SHOWN TO BE EXCELLENT FOR REMOVING VOLATILE ORGANIC CHEMICALS FROM DRINKING WATER DURING EMERGENCIES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL; V77 N5

IRIS ACCESSION NUMBER: EW012396

PUBLICATION DATE: 85

TITLE: FROM EXPOSURE TO THE PRINTED REPRODUCTION.

PERSONAL AUTHOR: MUHLEBACH, GERHARD; KOCH, HANS-CARL

DESCRIPTOR: *PHOTOGRAPHIC TECHNIQUES; *PHOTOGRAPHY; *PICTURE QUALITY; *PRINTING; *RECOMMENDATIONS

DESCRIPTIVE NOTE: 23-27P.

ABSTRACT: DESCRIBED ARE THE VARIABLES AFFECTING A PHOTOGRAPH FROM EXPOSURE TO REPRODUCTION IN A PRINTED PUBLICATION.

AVAILABILITY: TECHNICAL PHOTOGRAPHY; V17 N5

IRIS ACCESSION NUMBER: EW012397

PUBLICATION DATE: 85

TITLE: POST-SHOOTING CORRECTIVE PROCEDURES.

PERSONAL AUTHOR: SCHAUB, GEORGE

DESCRIPTOR: *PHOTOGRAPHIC TECHNIQUES; *PHOTOGRAPHY; *PICTURE QUALITY; *RECOMMENDATIONS

DESCRIPTIVE NOTE: 30-34, 50-51P.

ABSTRACT: DESCRIBED ARE METHODS FOR PARTIALLY CORRECTING PICTURES THAT HAVE IMPROPER COLOR BALANCE OR THAT ARE A STOP OR TWO OVER-OR UNDER-EXPOSED.

AVAILABILITY: TECHNICAL PHOTOGRAPHY; V17 N5

IRIS ACCESSION NUMBER: EW012398

PUBLICATION DATE: 85

TITLE: INNOVATIVE WATER QUALITY-BASED PERMITTING: A POLICY

PERSPECTIVE.

PERSONAL AUTHOR: DOWNING, DONNA; SESSIONS, STUART

DESCRIPTOR: *ADMINISTRATION; *COSTS; *ENFORCEMENT; *ENVIRONMENT; *PERMITS; *REGULATIONS; *WATER INNOVATIONS PROJECT; *WATER QUALITY

ABSTRACT: DISCUSSED ARE SEVERAL INNOVATIVE APPROACHES TO WATER QUALITY BASED PERMITTING. INCLUDED ARE SEASONAL PERMITS, VARIABLE PERMITS, SEASONAL STANDARDS, SITE-SPECIFIC STANDARDS, POINT SOURCE TRADING, POINT/NONPOINT SOURCE TRADES, AND BANKING.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V57 N5

IRIS ACCESSION NUMBER: EW012399

PUBLICATION DATE: 85

TITLE: INNOVATIVE WATER MANAGEMENT PLAN REDUCES TREATMENT COSTS.

PERSONAL AUTHOR: WILLEY, B. R.; BENJES, H. H., JR.

DESCRIPTOR: *AMMONIA; *COMPLIANCE; *EFFLUENTS; *LAGOONS; *MANAGEMENT; *MODELS; *OPERATIONS (WASTEWATER); *REGULATIONS; *WATER QUALITY; *WYOMING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 378-383P.

ABSTRACT: REASSESSMENT OF AMMONIA DISCHARGE CRITERIA USING A PREDICTIVE MODEL WAS THE KEY TO MEETING STREAM CRITERIA WHILE RESOLVING WATER RIGHTS ISSUES AND LOWERING CHARGES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V57 N5

IRIS ACCESSION NUMBER: EW012400

PUBLICATION DATE: 85

TITLE: USE OF A SWIRL CONCENTRATOR FOR COMBINED SEWER OVERFLOW MANAGEMENT.

PERSONAL AUTHOR: HEINKING, GARY; WILCOXON, NATHAN

DESCRIPTOR: *COSTS; *DESIGN; *COMBINED SEWER OVERFLOW; *FACILITIES; *ILLINOIS; *OPERATIONS (WASTEWATER); *SEWER OVERFLOWS; *SWIRL CONCENTRATIONS; *WASTEWATER COLLECTION; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 398-402P.

ABSTRACT: DECAUTER, ILLINOIS WAS HAVING COMBINED SEWER OVERFLOW PROBLEMS. LEAST-COST ANALYSIS CALLED FOR STORAGE AT THREE DIVERSION POINTS FOLLOWED BY SECONDARY TREATMENT IN SWIRL CONCENTRATORS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V57 N5

IRIS ACCESSION NUMBER: EW012401

PUBLICATION DATE: 85

TITLE: A CARBON ADSORPTION ISOTHERM TEST FOR VOLATILE ORGANIC CHEMICALS IN WATER.

PERSONAL AUTHOR: SCHNEITER, R. W.; AND OTHERS

DESCRIPTOR: *ACTIVATED CARBON; *ANALYTICAL TECHNIQUES; CHEMICALS; *BATCH ADSORPTION ISOTHERM TEST; *LABORATORY PROCEDURES; OPERATIONS (WASTEWATER); ORGANIC CHEMICALS; *VOLATILE ORGANIC CHEMICALS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 403-405P.

ABSTRACT: A TEST PROTOCOL HAS BEEN DEVELOPED THAT CONTROLS AND ESTIMATES CHEMICAL LOSSES CAUSED BY VOLATILIZATION. KEY FEATURES OF THE TEST ARE DISCUSSED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION; V57 N5

IRIS ACCESSION NUMBER: EW012402

PUBLICATION DATE: 85

TITLE: THE TEACHING OF CHEMICAL INSTRUMENTATION.

PERSONAL AUTHOR: EWING, GALEN W.; VAN SWAAY, MAARTEN

DESCRIPTOR: *COMPUTER APPLICATIONS; *CHEMISTRY; *CURRICULUM DEVELOPMENT; *INSTRUMENTATION; *INSTRUCTION; *HIGHER EDUCATION; *LABORATORY PROCEDURES; *POSTSECONDARY EDUCATION

DESCRIPTIVE NOTE: 385A-392AP.

ABSTRACT: EXPLORES QUESTIONS, DILEMMAS, AND ISSUES FACING INDIVIDUALS WHO TEACH AND/OR DEVELOP UNDERGRADUATE CURRICULA IN CHEMICAL INSTRUMENTATION. AREAS ADDRESSED INCLUDE THE INSTRUMENTAL ANALYSIS COURSE, THE LABORATORY, THE ROLE OF ELECTRONICS, AND COMPUTER USE.

AVAILABILITY: ANALYTICAL CHEMISTRY; V57 N3

IRIS ACCESSION NUMBER: EW012403

PUBLICATION DATE: 85

TITLE: SHIFTING TO AN HRD SYSTEMS APPROACH.

PERSONAL AUTHOR: KNOWLES, MALCOLM S.

DESCRIPTOR: *HUMAN RESOURCE DEVELOPMENT; *INSTRUCTION; *INSTRUCTIONAL MATERIALS; *PLANNING; *POSTSECONDARY

57

EDUCATION; *SYSTEMS APPROACH; *TRAINING

DESCRIPTIVE NOTE: 24-25P.

ABSTRACT: THE MOST UP-TO-DATE HRD PROFESSIONALS RECOGNIZE THAT ORGANIZATION IS A SYSTEM OF RESOURCES FOR LEARNING. EXAMPLES OF LEARNING RESOURCES THAT SHOULD BE MAINTAINED ARE DESCRIBED.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL; V39 N5

IRIS ACCESSION NUMBER: EW012404

PUBLICATION DATE: 85

TITLE: INTRODUCING NEW TECHNOLOGY HUMANELY.

PERSONAL AUTHOR: CONNER, DARYL R.

DESCRIPTOR: *CHANGE PROCESS; *DECISION MAKING; *FACILITATORS; *HUMAN RESOURCE DEVELOPMENT; *TECHNOLOGY; *TRAINING

DESCRIPTIVE NOTE: 33-36P.

ABSTRACT: TRANSLATING "USER FRIENDLY" RHETORIC INTO TANGIBLE ACTION REQUIRES HARD WORK AND SENSITIVITY. SUGGESTIONS FOR INCORPORATING NEW TECHNOLOGY INTO AN ORGANIZATION ARE PROVIDED. THE ROLE OF A FACILITATOR IS DESCRIBED.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL; V39 N5

IRIS ACCESSION NUMBER: EW012405

PUBLICATION DATE: 85

TITLE: NEW AGE LEARNING: FROM LINEAR TO GEODESIC.

PERSONAL AUTHOR: MEIER, DAVID

DESCRIPTOR: *EDUCATIONAL NEEDS; *LEARNING; *MANAGEMENT; *ORGANIZATIONS; *ORGANIZATIONAL STRUCTURE; *PLANNING; *TRAINING; *TRENDS; *TRAINING NEEDS

DESCRIPTIVE NOTE: 40-43P.

ABSTRACT: ORGANIZATIONS MODELED ON MUTUAL RELATIONSHIPS OFFER THE BEST PROMISE OF ADAPTING TO THE MODERN WORLD. EXAMPLES OF MODIFICATIONS NEEDED IN ORGANIZATIONS ARE DISCUSSED.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL; V39 N5

IRIS ACCESSION NUMBER: EW012406

PUBLICATION DATE: 85

TITLE: ON-THE-JOB TRAINING THAT WORKS.

PERSONAL AUTHOR: SULLIVAN, ROBERT F.; MIKLAS, DONALD C.

DESCRIPTOR: *COMMUNICATIONS; *PLANNING; *PROGRAM DEVELOPMENT; *TASK ANALYSIS; *TRAINING

DESCRIPTIVE NOTE: 118-120P.

ABSTRACT: THE NECESSARY INGREDIENTS FOR ON-THE-JOB PROGRAMS ARE WELL-DEFINED PERFORMANCE CRITERIA, THOROUGH PLANNING, CAREFUL MONITORING AND SENSITIVITY TO EMPLOYEE NEEDS. THE DESIGN OF A PROGRAM FOR AN ORGANIZATION IS DESCRIBED.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL; V39 N5

IRIS ACCESSION NUMBER: EW012407

PUBLICATION DATE: 85

TITLE: TRENDS IN DRINKING WATER TREATMENT: THE SHAPE OF THINGS TO COME. PART III - TREATMENT SYSTEMS FOR THE FUTURE.

PERSONAL AUTHOR: FULTON, GEORGE P.

DESCRIPTOR: *MAINTENANCE; *OPERATIONS (WATER); *PLANNING; *TRENDS; *WATER QUALITY; *WATER TREATMENT

DESCRIPTIVE NOTE: 80-83, 138-40P.

ABSTRACT: THIS CONCLUSION OF A THREE-PART SERIES EXAMINES THE TREND TO CUSTOMIZE WATER TREATMENT SYSTEMS.

AVAILABILITY: PUBLIC WORKS; V116 N6

IRIS ACCESSION NUMBER: EW012408

PUBLICATION DATE: 85

TITLE: DEVELOPING AN EFFECTIVE STORM DRAINAGE MAINTENANCE PROGRAM.

PERSONAL AUTHOR: ENGEMOEN, MARC; AND OTHERS

DESCRIPTOR: DESIGN; FACILITIES; *MAINTENANCE; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PLANNING; *STORM DRAINAGE; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 84-89P.

ABSTRACT: A SOUND PREVENTITIVE MAINTENANCE SYSTEM COUPLED WITH DESIGN TO MINIMIZE MAINTENANCE IN THE FIRST PLACE AVOIDS PROBLEMS IN A STORMWATER UTILITY.

AVAILABILITY: PUBLIC WORKS; V116 N6

IRIS ACCESSION NUMBER: EW012409

PUBLICATION DATE: 83

TITLE: CITY IMPLEMENTS TRIHALOMETHANE CONTROL PROGRAM.

PERSONAL AUTHOR: SIGMAN, JOHN G.; ASHLEY, WILLIAM M.

DESCRIPTOR: *AMMONIA; CHLORINATION; *DRINKING WATER; *OPERATIONS (WATER); *TRIHALOMETHANES; *WATER TREATMENT

DESCRIPTIVE NOTE: 92-99P.

ABSTRACT: DIRECT GAS AMMONIA INJECTION WAS USED TO CONTROL A TRIHALOMETHANE PROBLEM IN JACKSON, MISSISSIPPI.

AVAILABILITY: PUBLIC WORKS; V116 N6

IRIS ACCESSION NUMBER: EW012410

PUBLICATION DATE: 83

TITLE: WATER PLANT OPTIONS: BUILD ANEW OR RENOVATE?

PERSONAL AUTHOR: METZKER, DAVID L.

DESCRIPTOR: COSTS; *DRINKING WATER; *FACILITIES; *FACILITY ANALYSIS; *OHIO; *PLANNING; *RENOVATION; WATER RATES; *WATER TREATMENT

DESCRIPTIVE NOTE: 100-101P.

ABSTRACT: FINDLAY, OHIO MOVED TO RENOVATE A WATER TREATMENT PLANT IN TWO PHASES. THE PLANT HAD BEEN IN SERVICE SINCE 1931. THE PROCESS FOLLOWED IS DESCRIBED.

AVAILABILITY: PUBLIC WORKS; V116 N6

IRIS ACCESSION NUMBER: EW012411

PUBLICATION DATE: 83

TITLE: TREATMENT ON-THE-SPOT.

DESCRIPTOR: *FACILITIES; *EQUIPMENT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *PACKAGE TREATMENT PLANTS; *SURVEYS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 10-15P.

ABSTRACT: THIS ARTICLE CONTAINS INFORMATION ON THE OPERATION OF PACKAGE TREATMENT PLANTS, AN INFORMAL SURVEY OF PACKAGE PLANT OPERATORS, AND A SUMMARY OF SOME OF THE PITFALLS TO AVOID IN OPERATING THE PLANTS.

AVAILABILITY: OPERATIONS FORUM; V2 N5

IRIS ACCESSION NUMBER: EW012412

PUBLICATION DATE: 85

TITLE: SLUDGE COMPOSTING: LEARNING FROM EXPERIENCE.

PERSONAL AUTHOR: YEAMAN, BARBARA; WALKER, JOHN

DESCRIPTOR: *CASE STUDIES; *COMPOSTING; *MAINE; *OPERATIONS (WASTEWATER); *FACILITIES; *EQUIPMENT; *PERFORMANCE EVALUATION; *SLUDGE COMPOSTING; *SLUDGE; *WASTEWATER TREATMENT; *WASTE DISPOSAL; TRAINING

DESCRIPTIVE NOTE: 16-19P.

ABSTRACT: THIS IS THE SECOND OF A SERIES OF THREE ARTICLES. THIS ARTICLE EXAMINES THE OPERATION OF A FACILITY BURDENED WITH MANY PROBLEMS. THE OPERATION OF THE PLANT IS DISCUSSED AND LESSONS LEARNED FROM THE PLANT'S OPERATIONS ARE LISTED.

AVAILABILITY: OPERATIONS FORUM; V2 N5

IRIS ACCESSION NUMBER: EW012414

PUBLICATION DATE: 85

TITLE: GIARDIASIS: AN OVERVIEW OF ITS PUBLIC HEALTH SIGNIFICANCE.

PERSONAL AUTHOR: RAIDT, DANIEL E.; ACIERNO, LOUIS J.

DESCRIPTOR: *GIARDIASIS; *DIAGNOSIS; *PUBLIC HEALTH; *TRANSMISSION; *TREATMENT

DESCRIPTIVE NOTE: 297-299P.

ABSTRACT: THIS ARTICLE PROVIDES AN OVERVIEW OF THE PUBLIC HEALTH SIGNIFICANCE OF GIARDIASIS. IT HAS BEEN IDENTIFIED AS A CAUSATIVE AGENT OF WATERBORNE, FOODBORNE, AND SEXUALLY TRANSMITTED INFECTIONS DIARRHEA.

AVAILABILITY: JOURNAL OF ENVIRONMENTAL HEALTH; V47 N6

IRIS ACCESSION NUMBER: EW012415

PUBLICATION DATE: 85

TITLE: THE REMOTE CONNECTION.

PERSONAL AUTHOR: PHILLIPS, PAT

DESCRIPTOR: *AUTOMATED METERS; CABLE LINES; COMPUTER APPLICATIONS; *COSTS; *OPERATIONS (WATER); *REMOTE READING; TECHNOLOGY; *WATER SUPPLY; *WATER DISTRIBUTION; *WATER METERS

ABSTRACT: TECHNOLOGICAL ADVANCES ALLOW WATER UTILITIES TO READ METERS OVER TELEPHONE AND CABLE LINES, THUS REDUCING COSTS AND IMPROVING SERVICES.

AVAILABILITY: AMERICAN CITY AND COUNTY; V100 N6

IRIS ACCESSION NUMBER: EW012416

PUBLICATION DATE: 85

TITLE: NEW SYSTEM ENHANCES METER READING CAPABILITIES.

DESCRIPTOR: *AUTOMATED METERS; *BILLING; COSTS; OPERATIONS (WATER); *REMOTE READING; *TECHNOLOGY; *WATER DISTRIBUTION; *WATER METERS; *WATER SUPPLY

DESCRIPTIVE NOTE: 36P.

ABSTRACT: DESCRIBED IS AN AUTOMATED WATER METER READING AND BILLING SYSTEM IN USE IN NASHVILLE, TENNESSEE.

AVAILABILITY: AMERICAN CITY AND COUNTY; V100 N6

IRIS ACCESSION NUMBER: EW012417

PUBLICATION DATE: 85

TITLE: THE QUESTION OF RATES.

PERSONAL AUTHOR: HANSON, HUGH F.

DESCRIPTOR: CONNECTION FEES; DEMAND; *FINANCING; *RATE EQUALIZATION; *SERVICES; *SYSTEM DEVELOPMENT; *WATER RATES; *WATER SUPPLY; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 38-42P.

ABSTRACT: WITH INCREASED PRESSURE ON WATER UTILITIES TO MAINTAIN, IMPROVE AND EXPAND SERVICE, INNOVATIVE FINANCING AND RATE METHODOLOGIES ARE BEING IMPLEMENTED.

AVAILABILITY: AMERICAN CITY AND COUNTY; V100 N6

IRIS ACCESSION NUMBER: EW012418

PUBLICATION DATE: 85

TITLE: SYSTEMS ANALYSIS.

PERSONAL AUTHOR: RECKHOW, KENNETH H.

DESCRIPTOR: ASSESSMENT; *LITERATURE REVIEWS; MODELING; *MONITORING; *OPERATIONS (WASTEWATER); *OPERATIONS (WATER); *STATE-OF-THE-ART REVIEWS; *SYSTEMS ANALYSIS; WASTEWATER TREATMENT; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 438-41P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW ISSUE (EW 011 221). A DETAILED REVIEW OF THE LITERATURE IS PROVIDED FOR THE VARIOUS TOPICS RELATING TO SYSTEMS ANALYSIS AND WATER RESOURCES. TOPICS

ADDRESSED INCLUDE WATER QUALITY MODELING AND ASSESSMENTS, WATER QUALITY MONITORING, AND TOXIC CONTAMINANTS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

60

IRIS ACCESSION NUMBER: EW012419

PUBLICATION DATE: 85

TITLE: ECONOMICS.

PERSONAL AUTHOR: ELLERBROCK, M. J.

DESCRIPTOR: *COST-BENEFIT ANALYSIS; COSTS; *ENVIRONMENTAL POLICY; *ECONOMICS; *LITERATURE REVIEWS; *PUBLIC POLICY; *POLICIES; *WASTEWATER TREATMENT; *WATER RESOURCES; *WATER QUALITY; *MANAGEMENT

DESCRIPTIVE NOTE: 441-43P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW ISSUE (EW 011 222). A DETAILED REVIEW OF THE LITERATURE IS PROVIDED FOR ECONOMICS AND WATER RESOURCES. SOME NEW APPROACHES TO ECONOMICS, MANAGEMENT, AND ENVIRONMENTAL POLICY ARE IDENTIFIED. OTHER PAPERS ARE CONCERNED WITH TREATMENT COSTS, COST-BENEFIT ANALYSIS, AND WATER QUALITY.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012420

PUBLICATION DATE: 85

TITLE: LAW.

PERSONAL AUTHOR: COX, WILLIAM E.

DESCRIPTOR: *CLEAN WATER ACT; *DRINKING WATER; *ENVIRONMENTAL PROTECTION AGENCY; *HAZARDOUS SUBSTANCES; *LEGAL ASPECTS; *LEGISLATION; *LITERATURE REVIEWS; *POLLUTION CONTROL; *OPERATIONS (WASTEWATER); *WATER QUALITY; *WATER TREATMENT; *WASTEWATER TREATMENT; *ACID RAIN; NONPOINT POLLUTION

DESCRIPTIVE NOTE: 443-45P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW ISSUE (EW 011 223). A DETAILED REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO THE LEGAL ASPECTS OF POLLUTION CONTROL AND WATER QUALITY. TOPICS ADDRESSED INCLUDE HAZARDOUS WASTE MANAGEMENT, MARINE POLLUTION, TRANSBOUNDARY POLLUTION, NONPOINT POLLUTION, AND MUNICIPAL WASTE DISPOSAL.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012421

PUBLICATION DATE: 85

TITLE: CHEMICAL ANALYSIS OF WATER AND WASTEWATER: INORGANICS.

PERSONAL AUTHOR: POLCYN, DANIEL S.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHEMICALS; *DATA ANALYSIS; *INORGANIC COMPOUNDS; *LABORATORY PROCEDURES; *LITERATURE REVIEWS; *METALS; *SAMPLING; *TRACE METALS; *WATER QUALITY; *CHEMICAL ANALYSIS

DESCRIPTIVE NOTE: 446-62P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 224). A LISTING OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO INORGANIC SUBSTANCES. TOPICS COVERED INCLUDE PREANALYSIS PROCEDURES, SPECIATION, CHROMATOGRAPHIC METHODS, SPECTROPHOTOMETRIC METHODS, ELECTROCHEMICAL METHODS, X-RAY EMISSION, AND ANALYSIS FOR SPECIFIC CONSTITUENTS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012422

PUBLICATION DATE: 85

TITLE: CHEMICAL ANALYSIS OF WATER AND WASTEWATER: ORGANICS.

PERSONAL AUTHOR: ADAMS, V. DEAN; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; CHEMICAL ANALYSIS; DETERGENTS; *HYDROCARBONS; *LITERATURE REVIEWS; *ORGANIC COMPOUNDS; *PESTICIDES; *RESEARCH REPORTS; *WATER; *WASTEWATER; *WATER QUALITY

DESCRIPTIVE NOTE: 463-93P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 225). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO ORGANIC COMPOUNDS. TOPICS ADDRESSED INCLUDE TOTAL ORGANIC DETERMINATION, DETERGENTS, ALIPHATIC AND AROMATIC HYDROCARBONS, PESTICIDES, CHLORINATED HYDROCARBONS, AND ORGANICS IN WATER AND WASTEWATER. A DETAILED BIBLIOGRAPHY IS INCLUDED.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012423

PUBLICATION DATE: 85

TITLE: CHEMICAL ANALYSIS OF WATER AND WASTEWATER: WATER CHARACTERISTICS.

PERSONAL AUTHOR: BANDY, JOHN T.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; COLOR; *LITERATURE REVIEWS; RADIOACTIVITY; *RESEARCH REPORTS; *WATER CHARACTERISTICS; *WATER QUALITY; ODOR; ACID RAIN

DESCRIPTIVE NOTE: 494-97P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 226). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO WATER CHARACTERISTICS. TOPICS INCLUDED ARE ACID RAIN, RADIOACTIVITY, COLOR AND ODOR.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012424

PUBLICATION DATE: 85

TITLE: CHEMICAL ANALYSIS OF WATER AND WASTEWATER: CONTINUOUS MONITORING, AUTOMATED ANALYSIS, AND SAMPLING PROCEDURES.

PERSONAL AUTHOR: PITT, W. W.; JOLLEY, R. L.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *AUTOMATED ANALYSIS; *CONTINUOUS MONITORING; *INSTRUMENTATION; *MONITORING; *SAMPLING; *WASTEWATER; *WATER QUALITY

DESCRIPTIVE NOTE: 497-500P.

ABSTRACT: THIS ARTICLE, AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 277), CONSIDERS LITERATURE RELATED TO MONITORING, ANALYSIS, AND SAMPLING PROCEDURES OF WASTEWATER.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012425

PUBLICATION DATE: 85

TITLE: WASTEWATER TREATMENT: WASTEWATER COLLECTION.

PERSONAL AUTHOR: HOLLENBECK, ALAN J.

DESCRIPTOR: *DESIGN; *CONSTRUCTION; *FACILITIES; *LITERATURE REVIEWS; *MAINTENANCE; *RESEARCH REPORTS; *REHABILITATION; *SAFETY; *SEWERS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 501-03P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 228). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO WASTEWATER COLLECTION. TOPICS ADDRESSED INCLUDE PLANNING, SEWER SURVEY AND REHABILITATION, SAFETY, WASTEWATER PUMPING, AND MAINTENANCE.

61

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012426

PUBLICATION DATE: 85

TITLE: WASTEWATER TREATMENT-PHYSICAL AND CHEMICAL METHODS.

PERSONAL AUTHOR: PETERS, ROBERT W.; AND OTHERS

DESCRIPTOR: ADSORPTION; *CHEMICAL TREATMENT; COAGULATION; ION EXCHANGE; *LITERATURE REVIEWS; MEMBRANE PROCESSES; *OPERATIONS (WASTEWATER); OXIDATIVE PROCESSES; *PHYSICAL TREATMENT; *RESEARCH REPORTS; SOLIDS SEPARATION; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 503-17P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 229). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO PHYSICAL AND CHEMICAL METHODS OF WASTEWATER TREATMENT. TOPICS ADDRESSED INCLUDE PROCESS TECHNOLOGY, MIXING, FLUID FLOW, PRECIPITATION, COAGULATION, SOLID-LIQUID SEPARATION, ADSORPTION, ION EXCHANGE, SEPARATION PROCESSES, CORROSION CONTROL, OXIDATIVE PROCESSES, AND MEMBRANE PROCESSES. AN EXTENSIVE BIBLIOGRAPHY IS INCLUDED.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012427

PUBLICATION DATE: 85

TITLE: ACTIVATED SLUDGE.

PERSONAL AUTHOR: WEBER, A SCOTT; AND OTHERS

DESCRIPTOR: *ACTIVATED SLUDGE; DESIGN; INDUSTRIAL WASTES; INSTRUMENTATION; LITERATURE REVIEWS; MODELING; NITROGEN; PROCESS CONTROL; OXYGEN UPTAKE; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 517-26P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 230). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO ACTIVATED SLUDGE. TOPICS ADDRESSED INCLUDE PROCESS MODELING, PROCESS RESEARCH, DESIGN AND PERFORMANCE, PROCESS CONTROL, INDUSTRIAL WASTEWATER, NITROGEN METABOLISM, AND OXYGEN UPTAKE AND OXYGEN TRANSFER. AN EXTENSIVE BIBLIOGRAPHY IS INCLUDED.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012428

PUBLICATION DATE: 85

TITLE: BIOLOGICAL FIXED-FILM SYSTEMS.

PERSONAL AUTHOR: KINNER, N. E.; EICHMY, T. T.

DESCRIPTOR: *BIOLOGICAL CONTACTORS; *BIOLOGICAL FIXED-FILM SYSTEMS; *FACILITIES; *LITERATURE REVIEWS; *OPERATIONS (WASTEWATER); *RESEARCH; *TRICKLING FILTERS; *WASTEWATER TREATMENT; *ROTATING BIOLOGICAL CONTACTORS

DESCRIPTIVE NOTE: 526-31P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 231). THE ARTICLE REVIEWS LITERATURE RELATED TO BIOLOGICAL FIXED-FILM SYSTEMS FOR WASTEWATER. TOPICS COVERED INCLUDE ROTATING BIOLOGICAL CONTACTORS, TRICKLING FILTERS, FLUIDIZED BED REACTORS, AND BIOFILM RESEARCH.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012429

PUBLICATION DATE: 85

TITLE: LAGOONS, PONDS AND AEROBIC DIGESTION.

PERSONAL AUTHOR: BRYANT, CURTIS W.

DESCRIPTOR: *DESIGN; *FACILITIES; *LAGOONS; *LITERATURE REVIEWS; MODELS; *OXIDATION PONDS; *PERFORMANCE EVALUATION; *ROCESS CONTROL; OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 531-33P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 232). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO LAGOONS AND OXIDATION PONDS. TOPICS ADDRESSED INCLUDE PROCESS DESIGN, PROCESS PERFORMANCE, BIOLOGY, AND AEROBIC DIGESTION.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012430

PUBLICATION DATE: 85

TITLE: ANAEROBIC PROCESSES.

PERSONAL AUTHOR: CHYNOWETH, D. P.; AND OTHERS

DESCRIPTOR: *ANAEROBIC DIGESTION; *LITERATURE REVIEWS; MICROBIOLOGY; *OPERATIONS (WASTEWATER); PERFORMANCE EVALUATION; PROCESS DESCRIPTIONS; *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 533-39P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 234). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO ANAEROBIC PROCESSES. TOPICS ADDRESSED INCLUDE MICROBIOLOGY, PROCESS EVALUATION AND CONTROL, AND PROCESS APPLICATION.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012431

PUBLICATION DATE: 85

TITLE: SLUDGE TREATMENT, UTILIZATION AND DISPOSAL.

PERSONAL AUTHOR: HASIT, YAKIR

DESCRIPTOR: *DEWATERING; *LITERATURE REVIEWS; *RESEARCH REPORTS; *SLUDGE; *SLUDGE STABILIZATION; *SLUDGE TREATMENT; *SLUDGE UTILIZATION; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 539-45P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 235). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO SLUDGE TREATMENT, UTILIZATION, AND DISPOSAL. TOPICS ADDRESSED INCLUDE SLUDGE PROPERTIES, THERMAL TREATMENT, THICKENING, DEWATERING, STABILIZATION, AND ULTIMATE DISPOSAL AND USE.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012432

PUBLICATION DATE: 85

TITLE: ON-SITE ALTERNATIVES FOR TREATMENT AND DISPOSAL.

PERSONAL AUTHOR: DEESE, P. L.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGIES; CASE STUDIES; *DESIGN; *FACILITIES; *LITERATURE REVIEWS; *MANAGEMENT; *ONSITE DISPOSAL; *ONSITE TREATMENT; *RESEARCH REPORTS; *SANITATION; *SEPTIC TANKS; *SOILS; *TECHNOLOGY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 545-48P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 236). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO ONSITE ALTERNATIVES FOR TREATMENT AND DISPOSAL. TOPICS ADDRESSED INCLUDE POLLUTANTS IN SOIL, SITING AND DESIGN, PERFORMANCE, HEALTH IMPACTS, ALTERNATIVE ON-SITE SYSTEMS, AND SEPTAGE.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012433

PUBLICATION DATE: 85

TITLE: DISINFECTION.

PERSONAL AUTHOR: VENOSA, ALBERT D.; ISAAC, RUSSELL

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DISINFECTION; *INORGANIC COMPOUNDS; *LITERATURE REVIEWS; *MICROBIOLOGY; *OPERATIONS (WATER); *OPERATIONS (WASTEWATER); *ORGANIC COMPOUNDS; *RESEARCH REPORTS; *WATER QUALITY; *WATER TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 548-55P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 237). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATED TO DISINFECTION. TOPICS ADDRESSED INCLUDE MICROBIOLOGY, ANALYTICAL METHODS, DISINFECTIONS, ANALYTICAL PROCEDURES, AND BYPRODUCTS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012434

PUBLICATION DATE: 85

TITLE: OPTIMIZATION OF TREATMENT PLANT OPERATION.

PERSONAL AUTHOR: KUGELMAN, IRWIN J.; HOUTHOOFD, JANET M.

DESCRIPTOR: *COMPUTER APPLICATIONS; *INSTRUMENTATION; *LITERATURE REVIEWS; *MAINTENANCE; *MODELING; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *TECHNOLOGICAL ADVANCEMENTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 555-57P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 238). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATED TO OPTIMIZATION OF TREATMENT PLANT OPERATION. TOPICS ADDRESSED INCLUDE PROCESS CONTROL AND MODELLING, INSTRUMENTATION, OPERATIONS AND MAINTENANCE, AND ENERGY.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012435

PUBLICATION DATE: 85

TITLE: WATER RECLAMATION AND REUSE.

PERSONAL AUTHOR: HRUDEY, STEVE E.; FINCH, GORDON R.

DESCRIPTOR: AGRICULTURE; *COMMERCIAL WATER USE; *DOMESTIC WATER USE; GROUNDWATER; *INDUSTRY; IRRIGATION; *LITERATURE REVIEWS; *RECYCLING; *RESEARCH REPORTS; TECHNOLOGY; *WATER TREATMENT; *WASTEWATER TREATMENT; *WATER QUALITY; *WATER

63

RECLAMATION; *WATER RESOURCES; *WATER REUSE

DESCRIPTIVE NOTE: 557-60P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 239). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO WATER RECLAMATION AND REUSE. TOPICS ADDRESSED INCLUDE WATER RESOURCES PLANNING, AGRICULTURE AND IRRIGATION, GROUNDWATER RECHARGE, INDUSTRIAL WATER REUSE, DOMESTIC REUSE, AND TECHNOLOGY DEVELOPMENT.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012436

PUBLICATION DATE: 85

TITLE: LAND APPLICATION OF WASTEWATER.

PERSONAL AUTHOR: ZIRSCHKY, JOHN; ABERNATHY, A. RAY

DESCRIPTOR: *LAND APPLICATION; *LITERATURE REVIEWS; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 561-63P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 240). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO LAND APPLICATION OF WASTEWATERS. TOPICS ADDRESSED INCLUDE SPRAY IRRIGATION, RAPID INFILTRATION, OVERLAND FLOW, AQUACULTURE, AND SEPTIC TANKS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012437

PUBLICATION DATE: 85

TITLE: URBAN RUNOFF AND COMBINED SEWER OVERFLOW.

PERSONAL AUTHOR: MOFFA, PETER E.; AND OTHERS

DESCRIPTOR: *COMBINED SEWERS; DESIGN; *HYDROLOGY; *LITERATURE REVIEWS; *MANAGEMENT; *RESEARCH REPORTS; *SEWERS; *STORMWATER; *SURFACE RUNOFF; *URBAN AREAS; *WASTEWATER COLLECTION; WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 563-66P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 241). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO URBAN RUNOFF AND COMBINED SEWER OVERFLOW. TOPICS ADDRESSED INCLUDE CHARACTERISTICS, HYDROLOGY, RECEIVING WATER, CONTROL AND TREATMENT, AND MANAGEMENT.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012438

PUBLICATION DATE: 85

TITLE: HEALTH EFFECTS ASSOCIATED WITH WASTEWATER TREATMENT AND DISPOSAL.

PERSONAL AUTHOR: CLARK, C. S.

DESCRIPTOR: *AQUACULTURE; *COMPOSTING; *HEALTH EFFECTS; *LAND APPLICATION; *LITERATURE REVIEWS; *PUBLIC HEALTH; *RESEARCH REPORTS; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *RECYCLING

DESCRIPTIVE NOTE: 566-69P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 242). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO HEALTH EFFECTS ASSOCIATED WITH WASTEWATER TREATMENT AND DISPOSAL. TOPICS ADDRESSED INCLUDE WASTEWATER TREATMENT PLANTS AND COLLECTION SYSTEMS, LAND APPLICATION OF WASTEWATER AND SLUDGE, WASTEWATER REUSE, AND HAZARDOUS WASTES.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012439

PUBLICATION DATE: 85

TITLE: MEAT, FISH, AND POULTRY PROCESSING WASTES.

PERSONAL AUTHOR: MCCOMIS, WILLIAM T.; LITCH FIELD

DESCRIPTOR: *FISH; *INDUSTRIAL WASTES; *LITERATURE REVIEWS; *MEAT; *POULTRY; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 570-73P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 243). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO MEAT, FISH, AND POULTRY PROCESSING WASTES.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012440

PUBLICATION DATE: 85

TITLE: FRUIT, VEGETABLE, AND GRAIN WASTES.

PERSONAL AUTHOR: MORRELL, ROBERT A.; SCHMIDT, HAROLD E., JR.

DESCRIPTOR: *AGRICULTURAL WASTES; *FRUITS; *GRAINS; *INDUSTRIAL WASTES; *LITERATURE REVIEWS; *RESEARCH REPORTS; *VEGETABLES; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 573-75P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 244). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO FRUIT, VEGETABLE AND GRAIN PROCESSING WASTES.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012441

PUBLICATION DATE: 85

TITLE: FERMENTATION INDUSTRY.

PERSONAL AUTHOR: CHIESA, STEVEN C.; MANNING, JOHN F., JR.

DESCRIPTOR: *FERMENTATION; *INDUSTRIAL WASTES; *LITERATURE REVIEWS; *RESEARCH REPORTS; *WASTE DISPOSAL; *WASTE RECOVERY; *WASTEWATER RECOVERY; *WASTEWATER RECYCLING; *WASTEWATER REUSE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 575-77P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 243). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO THE FERMENTATION INDUSTRY. TOPICS ADDRESSED INCLUDE BREWERIES, WINERIES, PHARMACEUTICALS, ALCOHOL FUEL PRODUCTION, AND DISTILLERIES.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012442

PUBLICATION DATE: 85

TITLE: DAIRY WASTES.

PERSONAL AUTHOR: PICO, RICHARD F.

DESCRIPTOR: *AGRICULTURAL WASTES; *CASE STUDIES; *DAIRY WASTES; *INDUSTRIAL WASTES; *LITERATURE REVIEWS; *RESEARCH REPORTS; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *MANAGEMENT; *REGULATIONS

DESCRIPTIVE NOTE: 577-78P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 246). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO DAIRY WASTES. TOPICS ADDRESSED INCLUDE CASE HISTORIES, GOVERNMENT REGULATIONS, AND RESEARCH.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012443

PUBLICATION DATE: 85

TITLE: AGRICULTURAL WASTES.

PERSONAL AUTHOR: HILTON, B. L.; AND OTHERS

DESCRIPTOR: *AGRICULTURAL WASTES; *BIOLOGICAL TREATMENT; *CHEMICAL TREATMENT; *ECONOMICS; *LITERATURE REVIEWS; *INDUSTRIAL WASTES; *MANAGEMENT; *RESEARCH REPORTS; *WASTE DISPOSAL; *WASTE TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 578-85P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 247). THE ARTICLE REVIEWS LITERATURE ON AGRICULTURAL WASTES. TOPICS CONSIDERED INCLUDE (1) BIOLOGICAL TREATMENT AND KINETICS, (2) TREATMENT OF COMBINED SUBSTRATES, (3) DESIGN, OPERATION, AND PRETREATMENT, (4) ECONOMIC ANALYSES, (5) PESTICIDE REDUCTION, AND (6) BURNING AND PYROLSIS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012444

PUBLICATION DATE: 85

TITLE: TEXTILE WASTES.

PERSONAL AUTHOR: GROFF, KIMBERLY A.; KIM, BYUNG R.

DESCRIPTOR: *INDUSTRIAL WASTES; *LITERATURE REVIEWS; *RESEARCH REPORTS; *TEXTILES; *WASTE DISPOSAL; *WASTE RECOVERY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 585-87P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 248). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO TEXTILE WASTEWATER.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012445

PUBLICATION DATE: 85

TITLE: PULP AND PAPER EFFLUENT MANAGEMENT.

PERSONAL AUTHOR: GILLESPIE, WILLIAM J.

DESCRIPTOR: BIOLOGICAL TREATMENT; *EFFLUENTS; *FOREST PRODUCTS; *INDUSTRIAL WASTES; *LITERATURE REVIEWS; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PAPER INDUSTRY; *PULP INDUSTRY; *RESEARCH REPORTS; *WASTE DISPOSAL; *WASTE

DESCRIPTIVE NOTE: 587-91P.

65

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 249). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO PULP AND PAPER EFFLUENT MANAGEMENT.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V37 N6

IRIS ACCESSION NUMBER: EW012446

PUBLICATION DATE: 85

TITLE: COAL AND COAL MINE DRAINAGE.

PERSONAL AUTHOR: OLEM, HARVEY; BETSON, ROGER P.

DESCRIPTOR: *COAL; *COAL CLEANING; *COAL INDUSTRY; *COAL MINE DRAINAGE; *ENVIRONMENTAL IMPACTS; *INDUSTRIAL WASTES; *LITERATURE REVIEWS; *MINING; *POLLUTION CONTROL; *RESEARCH REPORTS; STORAGE; TRANSPORTATION; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *REGULATIONS

DESCRIPTIVE NOTE: 591-96P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 250). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO COAL AND COAL MINE DRAINAGE. TOPICS ADDRESSED INCLUDE COAL MINING, COAL CLEANING, TRANSPORTATION AND STORAGE, AND REGULATIONS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V37 N6

IRIS ACCESSION NUMBER: EW012447

PUBLICATION DATE: 85

TITLE: PETROLEUM PROCESSING AND SYNTHETIC FUELS.

PERSONAL AUTHOR: COWAN, BRENT W.; STOVER, ENOS L.

DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *EFFLUENTS; *ENVIRONMENTAL IMPACTS; *INDUSTRIAL WASTES; *LITERATURE REVIEWS; *PETROLEUM; *RESEARCH REPORTS; *SYNTHETIC FUELS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 596-99P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 251). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO PETROLEUM PROCESSING AND SYNTHETIC FUELS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V37 N6

IRIS ACCESSION NUMBER: EW012448

PUBLICATION DATE: 85

TITLE: POWER INDUSTRY WASTES.

PERSONAL AUTHOR: IWANSKI, MYRON L.; CHU, T. JULIAN

DESCRIPTOR: *ENERGY; FLUIDIZED-BED COMBUSTION; FOSSIL FUELS; *INDUSTRIAL WASTES; *LITERATURE REVIEWS; *NUCLEAR POWER; *POWER PRODUCTION; *POWER INDUSTRY; REGULATIONS; *RESEARCH REPORTS; *WASTE TREATMENT; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 599-610P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 252). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATED TO POWER INDUSTRY WASTES. TOPICS ADDRESSED INCLUDE ENVIRONMENTAL REGULATION, HYDROELECTRIC POWER PLANTS, FOSSIL-FUELED POWER PLANTS, NUCLEAR POWER PLANTS, AND FLUIDIZED BED COMBUSTION.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012449

PUBLICATION DATE: 85

TITLE: STEEL INDUSTRY WASTES.

PERSONAL AUTHOR: CHUNG, N. K.

DESCRIPTOR: *COKE PRODUCTION; *ENVIRONMENTAL IMPACTS; *INDUSTRIAL WASTES; *POLLUTION CONTROL; *RESEARCH REPORTS; *STEEL INDUSTRY; *TECHNOLOGY; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 610P. 11

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 253). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO STEEL INDUSTRY WASTES. TOPICS ADDRESSED INCLUDE REGULATIONS AND COKE PRODUCTION.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, V57 N6

IRIS ACCESSION NUMBER: EW012450

PUBLICATION DATE: 85

TITLE: ELECTROPLATING AND CYANIDE WASTES.

PERSONAL AUTHOR: HIGGINS, THOMAS E.; DESHER, DREW P.

DESCRIPTOR: *CYANIDE; *ELECTROPLATING; *HEAVY METALS; *INDUSTRIAL WASTES; *LITERATURE REVIEWS; *POLLUTION CONTROL; *REGULATIONS; *RESEARCH REPORTS; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 611-14P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 254). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO ELECTROPLATING AND CYANIDE WASTES. TOPICS ADDRESSED INCLUDE REGULATIONS,

RECOVERY TECHNIQUES, AND HEAVY METAL TREATMENT.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012451

PUBLICATION DATE: 85

TITLE: CHEMICALS AND ALLIED PRODUCTS.

PERSONAL AUTHOR: DEL PINO, M. P.

DESCRIPTOR: *BIOLOGICAL TREATMENT; *CHEMICAL INDUSTRY; *CHEMICALS; *INDUSTRIAL WASTES; *LITERATURE REVIEWS; *POLLUTION CONTROL; *RESEARCH REPORTS; *WASTE DISPOSAL; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 614-19P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 911 255). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO CHEMICALS AND ALLIED PRODUCTS. TOPICS ADDRESSED INCLUDE WASTEWATER TREATMENT BY PRODUCT TYPE, SOURCE TREATMENT, BIOLOGICAL TREATMENT, AND PHYSICAL/CHEMICAL TREATMENT.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012452

PUBLICATION DATE: 85

TITLE: RADIOACTIVE WASTES.

PERSONAL AUTHOR: BOEGLY, W. J. I.; ALEXANDER, H. J.

DESCRIPTOR: *INDUSTRIAL WASTES; *LITERATURE REVIEWS; *MONITORING; *NUCLEAR POWER; *RADIOACTIVE MATERIALS; *RADIOACTIVE WASTES; *RESEARCH REPORTS; RISK ASSESSMENT; *STORAGE; TRANSPORTATION; *WASTE DISPOSAL; *WASTE MANAGEMENT

DESCRIPTIVE NOTE: 619-25P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 911 256). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO RADIOACTIVE WASTES.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012453

PUBLICATION DATE: 85

TITLE: SOLID WASTES AND WATER QUALITY.

PERSONAL AUTHOR: BROWER, C. R.

DESCRIPTOR: ENVIRONMENTAL IMPACTS; FACILITIES; *GROUNDWATER; *HAZARDOUS WASTES; *INDUSTRIAL WASTES; *LITERATURE REVIEWS; *RESEARCH REPORTS; *SOLID WASTES; *WASTE DISPOSAL; *WASTE MANAGEMENT; *WASTE TREATMENT; *WATER QUALITY; MONITORING

DESCRIPTIVE NOTE: 625-29P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 257). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO SOLID WASTES AND WATER QUALITY. TOPICS ADDRESSED INCLUDE TREATMENT CHARACTERIZATION AND MONITORING HAZARDOUS WASTES, FLY ASH AND INCINERATORS, AND URANIUM, COAL AND MINING.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012454

PUBLICATION DATE: 85

TITLE: NONPOINT SOURCES.

PERSONAL AUTHOR: NEWELL, A. D.; AND OTHERS

DESCRIPTOR: *LITERATURE REVIEWS; *MANAGEMENT; *MODELING; *MONITORING; *NONPOINT SOURCE POLLUTION; *POLLUTION CONTROL; *RESEARCH REVIEWS; *WATER QUALITY; *WATER POLLUTION

DESCRIPTIVE NOTE: 630-34P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 258). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO NON-POINT SOURCES. TOPICS ADDRESSED INCLUDE IMPACT, QUANTIFACTION, AND MODELING.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012455

PUBLICATION DATE: 85

TITLE: MIXING AND TRANSPORT.

PERSONAL AUTHOR: ROBERTS, PHILIP J. W.

DESCRIPTOR: *AQUATIC ENVIRONMENTS; *ESTUARIES; *LAKES; *LITERATURE REVIEWS; *POLLUTION CONTROL; *RESEARCH REPORTS; *RIVERS; *WATER POLLUTION; *WATER QUALITY

DESCRIPTIVE NOTE: 634-38P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 259). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO MIXING AND TRANSPORT. TOPICS ADDRESSED INCLUDE STREAMS AND RIVERS; LAKES, RESERVOIRS, AND COOLING PONDS; ESTUARIES AND SALT MARSHES; COASTAL WATERS; JETS AND PLUMES; AND STRATIFIED FLUIDS.

67

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012456

PUBLICATION DATE: 85

TITLE: DISSOLVED OXYGEN IN STREAMS AND RESERVOIRS.

PERSONAL AUTHOR: BOHAC, CHARLES E.; POPPE, WAYNET L.

DESCRIPTOR: *DESTRATIFICATION; *DISSOLVED OXYGEN; *GAS MEASUREMENT; *GAS TRANSFER; *LITERATURE REVIEWS; *MODELING; *REAERATION; *RESEARCH REPORTS; *RESERVOIRS; *STREAMS; *WASTEWATER; *WATER QUALITY; *MONITORING

DESCRIPTIVE NOTE: 639-42P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 261). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO DISSOLVED OXYGEN IN STREAMS AND RESERVOIRS. TOPICS ADDRESSED INCLUDE WATER QUALITY MODELS, OXYGEN DEMAND AND RESPONSE TO WASTE LOADS, METHODS, GAS TRANSFER, MONITORING, AND AQUATIC EFFECTS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012457

PUBLICATION DATE: 85

TITLE: GROUNDWATER QUALITY.

PERSONAL AUTHOR: NOSS, RICHARD R.

DESCRIPTOR: *BIBLIOGRAPHIES; *CONTAMINATION; *GROUNDWATER; *LITERATURE REVIEWS; *MANAGEMENT; *MONITORING; *RESEARCH REPORTS; *SAMPLING; *WASTE DISPOSAL; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 642-49P.

ABSTRACT: THIS IS A DETAILED REVIEW OF THE LITERATURE RELATED TO GROUNDWATER QUALITY. TOPICS ADDRESSED INCLUDE CONTAMINANTS, MONITORING, SAMPLING, SAMPLE ANALYSIS, MODELING, WASTE DISPOSAL, AND GROUNDWATER QUALITY MANAGEMENT. A DETAILED BIBLIOGRAPHY IS INCLUDED.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012458

PUBLICATION DATE: 85

TITLE: THERMAL EFFECTS.

PERSONAL AUTHOR: CRAVENS, JOE BOB; HARRELSON, MICHAEL E.

DESCRIPTOR: *ECOLOGY; *ENVIRONMENTAL IMPACTS; *LITERATURE REVIEWS; *RESEARCH; *RESEARCH REVIEWS; *THERMAL POLLUTION; *WATER QUALITY; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 649-58P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 L'TERATURE REVIEW (EW 011 262). THIS ARTICLE REVIEWS LITERATURE ON THE EFFECTS OF THERMAL POLLUTION. INFORMATION DISCUSSED INCLUDES MODELS, SITE STUDIES, PRODUCERS, CONSUMERS, DISTRIBUTION, THERMAL TOLERANCE, AND OTHER ITEMS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012459

PUBLICATION DATE: 85

TITLE: FATE OF ENVIRONMENTAL POLLUTANTS.

PERSONAL AUTHOR: PRITCHARD, P. H.

DESCRIPTOR: *CHEMICAL REACTIONS; *ENVIRONMENTAL IMPACTS; *HYDROCARBONS; *LITERATURE REVIEWS; *HEAVY METALS; *ORGANIC COMPOUNDS; *PESTICIDES; *POLLUTION; *RESEARCH; *RESEARCH REVIEWS

DESCRIPTIVE NOTE: 658-67P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 263). THIS ARTICLE REVIEWS RESEARCH ON THE FATE OF POLLUTANTS IN THE ENVIRONMENT. INFORMATION IS INCLUDED ON PESTICIDES, PETROLEUM HYDROCARBONS, CHLORINATED AROMATED HYDROCARBONS, POLYCYCLIC HYDROCARBONS, HEAVY METALS, AND OTHER ORGANIC COMPOUNDS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012460

PUBLICATION DATE: 85

TITLE: EFFECTS OF POLLUTION ON FRESHWATER ORGANISMS.

PERSONAL AUTHOR: ROUSH, THOMAS H.; AND OTHERS

DESCRIPTOR: *AQUATIC ENVIRONMENTS; *AQUATIC ORGANISMS; *BIOLOGY; *CHEMICALS; ECOLOGY; *ENVIRONMENTAL IMPACTS; *INVERTEBRATES; *LITERATURE REVIEWS; *FISH; INDUSTRIAL WASTES; *PLANTS; RESEARCH; *RESEARCH REVIEWS; *VERTEBRATES; *WATER QUALITY; *WATER POLLUTION

DESCRIPTIVE NOTE: 667-99P.

ABSTRACT: THIS REVIEW IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 REVIW (EW 011 264). THE REVIEW INCLUDES INFORMATION OF THE EFFECT OF POLLUTION ON PLANTS AND ANIMALS. EXTENSIVE LISTS ARE PROVIDED FOR VARIOUS CHEMICALS WITH REFERENCES TO

ORGANISMS FOR EACH CHEMICAL. AN EXTENSIVE BIBLIOGRAPHY IS ALSO INCLUDED.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012461

PUBLICATION DATE: 85

TITLE: EFFECTS ON SALTWATER ORGANISMS.

PERSONAL AUTHOR: REISH, DONALD J.; AND OTHERS

DESCRIPTOR: *DREDGING; *DUMPING; *EFFLUENTS; *ESTUARIES; *LITERATURE REVIEWS; *MARINE ENVIRONMENTS; *MICROBIOLOGY; *OCEANS; *OIL DRILLING; *OIL SPILLS; *PESTICIDES; *POLLUTION CONTROL; *RESEARCH REPORTS; *WASTE DISPOSAL; *WATER POLLUTION; *WATER QUALITY

DESCRIPTIVE NOTE: 699-712P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 265). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO MARINE POLLUTION. TOPICS ADDRESSED INCLUDE PESTICIDES, RESIDUES, SURVEYS, DISEASES AND ABNORMALITIES, DUMPING, DREDGING, MINED MATERIALS, AND OIL POLLUTION. AN EXTENSIVE BIBLIOGRAPHY IS INCLUDED.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012462

PUBLICATION DATE: 85

TITLE: AQUATIC SEDIMENTS.

PERSONAL AUTHOR: LATHROP, JOYCE E.; DAVIS, WAYNE S.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *AQUATIC ENVIRONMENTS; *HEAVY METALS; *LITERATURE REVIEWS; *MODELING; *NUTRIENTS; *ORGANIC COMPOUNDS; *RESEARCH REPORTS; *SAMPLING; *SEDIMENTS; *WATER POLLUTION; *WATER QUALITY

DESCRIPTIVE NOTE: 712-24P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 267). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO AQUATIC SEDIMENTS. TOPICS ADDRESSED INCLUDE ANALYTICAL AND SAMPLING METHODS, HEAVY METALS, BIOLOGICAL ACTIVITY, ORGANICS, NUTRIENTS, AND MODELING AND SEDIMENT TRANSPORT.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012463

PUBLICATION DATE: 85

TITLE: SUBSTRATE ASSOCIATED MICROFAUNA.

PERSONAL AUTHOR: LAZORCHAK, JAMES M.; BURTON, G. ALLEN JR.

DESCRIPTOR: *ECOLOGY; *ECOLOGICAL FACTORS; *LITERATURE REVIEWS; *MICROFAUNA; *MICROBOLOGY; *RESEARCH REPORTS; *WATER POLLUTION; *WATER QUALITY

DESCRIPTIVE NOTE: 724-28P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 268). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO SUBSTRATE ASSOCIATED MICROFAUNA. TOPICS ADDRESSED INCLUDE METHODOLOGY AND ECOLOGY.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012464

PUBLICATION DATE: 85

TITLE: HUMAN HEALTH EFFECTS ASSAYS.

PERSONAL AUTHOR: SIMS, RONALD C.; AND OTHERS

DESCRIPTOR: *BACTERIA; *ASSAYS; *CHEMICALS; *ENVIRONMENTAL EFFECTS; *HUMANS; *LITERATURE REVIEWS; *POLLUTION; *PUBLIC HEALTH; *RESEARCH; *SAMPLING; *RESEARCH REVIEWS; *TESTING

DESCRIPTIVE NOTE: 728-42P.

ABSTRACT: THIS ARTICLE IS AN UPDATE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 269). THIS ARTICLE REVIEWS RESEARCH ON HUMAN HEALTH EFFECTS OF POLLUTANTS. SECTIONS INCLUDE TEST SYSTEMS, ENVIRONMENTAL SAMPLES, CHEMICALS, AND BACTERIAL ASSAYS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

IRIS ACCESSION NUMBER: EW012465

PUBLICATION DATE: 85

TITLE: DETECTION AND OCCURRENCE OF WATER BORNE BACTERIAL AND VIRAL PATHOGENS.

PERSONAL AUTHOR: LEE, SAI H.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ANIMALS; *BACTERIA; *CONTAMINATION; *LITERATURE REVIEWS; *MICROBIOLOGY; *PATHOGENS; *RESEARCH REPORTS; *WATER POLLUTION; *WATER QUALITY; *VIRUSES; *HEALTH EFFECTS

DESCRIPTIVE NOTE: 742-47P.

69

ABSTRACT: THIS ARTICLE IS AN UPDITE TO ONE THAT APPEARED IN THE 1984 LITERATURE REVIEW (EW 011 270). A REVIEW OF THE LITERATURE IS PROVIDED FOR TOPICS RELATING TO BACTERIAL PATHOGENS AND VIRUSES.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION; V57 N6

AUTHOR INDEX

ABERNATHY, A. RAY
EW 012 436

ABRON-ROBINSON, LILIA A.
EW 011 893
EW 011 897

ACIERNO, LOUIS J.
EW 012 414

ADAMS, V. DEAN
EW 012 422

ALEXANDER, H. J.
EW 012 452

ASHLEY, WILLIAM M.
EW 012 409

BANDY, JOHN T.
EW 012 423

BENJES, H. H., JR.
EW 012 399

BENNETT, E. R.
EW 012 353

BETSON, ROGER P.
EW 012 446

BOEGLY, W. J. J.
EW 012 452

BOHAC, CHARLES E.
EW 012 456

BOMBERGER, DAVID C.
EW 012 306

BOOT, MARIEKE T.
EW 012 195

BOUMA, J., EDITOR
EW 012 339

BOYLE, WILLIAM C., ED.
EW 012 285

BROWER, C. R.
EW 012 453

BRUNNER, C. R.
EW 012 368

BRYANT, CURTIS W.
EW 012 429

BURTON, C. ALLEN JR.
EW 012 463

CAHALL, KATHLEEN M.
EW 012 054

CANTER, LARRY
EW 012 310

CASHMAN, JOHN R., ED.
EW 012 359

CHARBENEAV, RANDALL J.
EW 012 376

CHEREMISINOFF, PAUL N.
EW 012 360

CHIESA, STEVEN C.
EW 012 441

CHU, T. JULIAN
EW 012 448

CHUNG, N. K.
EW 012 449

CHYNOWETH, D. P.
EW 012 430

CLARK, C. S.
EW 012 438

CLARK, ROBERT M.
EW 012 308

CLEASBY, JOHN L.
EW 012 277

CONNER, DARYL R.
EW 012 404

COOPER, IVAN A.
EW 012 288

CORTINOVIS, DAN
EW 012 325
EW 012 326

COWAN, BRENT W.
EW 012 447

COX, WILLIAM E.
EW 012 420

CRAVENS, JOE BOB
EW 012 458

CUSHINE, C. C. JR.
EW 012 367

DAVIS, WAYNE S.
EW 012 462

DEESE, P. L.
EW 012 432

DEL PINO, M. P.
EW 012 451

DESHER, DREW P.
EW 012 450

DEWALLE, FOPPE B.
EW 012 287

DHALIWAL, BHUPINDER S.
EW 012 055

DIX, STEPHEN, P., ED.
EW 011 902

DOWNING, DONNA
EW 012 398

DUFOUR, A. P.
EW 012 356

ECOLOGY AND ENVIRONMENT, INC., ET AL.
EW 012 369

EIGHMY, T. T.
EW 012 428

ELLERBROCK, M. J.
EW 012 419

ENGEMOEN, MARC
EW 012 408

EVERETT, L. G.
EW 012 276

EVERETTS, L. G.
EW 012 370

EWING, GALEN W.
EW 012 402

EWING, JAMES W.
EW 012 283

FINCH, GORDON R.
EW 012 435

FINSTEIN, M. S.
EW 012 284

FORDHAM, J. W., AND COCHRAN, C. F.
EW 012 244

FREDERICK, KENNETH D.
EW 012 280

FULTON, GEORGE P.
EW 012 407

GILBERT, PAUL F.
EW 011 889

GILLESPIE, WILLIAM J.
EW 012 445

GOODRICH, JAMES A.
EW 012 308

GROFF, KIMBERLY A.
EW 012 444

GUSWA, J. H.
EW 012 373

HAAS, OSCAR W.
EW 011 887

HANSON, HUGH F.
EW 012 417

HARLOW, ROBERT B.
EW 012 057

HARRELSON, MICHAEL E.
EW 012 458

HARTHILL, MICHALANN, ED.
EW 012 362

HASIT, YAKIR
EW 012 431

HEIDMAN, JAMES A.
EW 011 639

HEINKING, GARY
EW 012 400

HERNANDEZ, LYDIA E.
EW 012 054

HIGGINS, THOMAS E.
EW 012 450

HILTON, B. L.
EW 012 443

HINESLY, T. D.
EW 011 892

HOLLENBECK, ALAN J.
EW 012 425

HORTON, DEBBIE
EW 011 709
EW 011 751

HOUTHOOFD, JANET M.
EW 012 434

73

HRUDEY, STEVE E.
EW 012 435

HUBER, WAYNE C.
EW 012 305

HUBLY, DAVID
EW 012 282

HYDE, HENRY C.
EW 011 888
EW 011 895

IRVINE, R. L.
EW 012 354
EW 012 355

ISAAC, RUSSELL
EW 012 433

IWANSKI, MYRON L.
EW 012 448

JOHNSON, J. DONALD
EW 011 898

JOLLEY, R. L.
EW 012 424

JONES, LARRY W.
EW 012 281

KAISER, KLAUS L. E.
EW 012 340

KALOWSKI, NATHAN
EW 012 060

KAROLCHIK, TRINA L., ED.
EW 011 902

KEITH, L. H.
EW 012 364

KERRI, KENNETH D.
EW 012 213

KIM, BYUNG R.
EW 012 444

KINCANNON, D. F., AND
STOVER, E. L.
EW 012 254

KINNER, N. E.
EW 012 428

KNOWLES, MALCOLM S.
EW 012 403

KNOX, ROBERT C.
EW 012 310

KOCH, HANS-CARL
EW 012 396

KUGELMAN, IRWIN J.
EW 012 434

KULIN, G.
EW 012 208

KULIN, GERSHON
EW 011 899
EW 011 900
EW 011 901

LANGE, KELLY P.
EW 012 311

LATHROP, JOYCE E.
EW 012 462

LAZORCHAK, JAMES M.
EW 012 463

LEBRUN, THOMAS J.
EW 012 304

LEE, SAI H.
EW 012 465

LEO, WILLIAM M.
EW 011 651

LUND, L. J.
EW 012 286

MALONE, PHILIP G.
EW 012 281

MANNING, JOHN F., JR.
EW 012 441

MCCOMIS, WILLIAM T.
EW 012 439

MEIER, DAVID
EW 012 405

METZKER, DAVID L.
EW 012 410

MIKLAS, DONALD C.
EW 012 406

MOFFA, PETER E.
EW 012 437

MORRELL, ROBERT A.
EW 012 440

MUHLEBACH, GERHARD
EW 012 396

NEWELL, A. D.
EW 012 454

NOSS, RICHARD R.
EW 012 457

OLEM, HARVEY
EW 012 446

PATTERSON, JAMES C.
EW 012 290

PENTLICKY, C.
EW 012 268

PETERS, JOS H.
EW 012 393

PETERS, ROBERT W.
EW 012 426

PHILLIPS, PAT
EW 012 415

PICO, RICHARD F.
EW 012 442

PILLI, A.
EW 012 063

PISANO, WILLIAM C.
EW 011 891

PITT, W. W.
EW 012 424

POLCYN, DANIEL S.
EW 012 421

POPPE, WAYNET L.
EW 012 456

PRITCHARD, P. H.
EW 012 459

QUALLS, ROBERT C.
EW 011 898

RAAB, FREDRIC J.
EW 012 059

RAIDT, DANIEL E.
EW 012 414

RAND, C. M., AND
PETROCELLI, S. R.
EW 012 363

RECKHOW, KENNETH H.
EW 012 418

REDBORG, K. E.
EW 011 892

REISH, DONALD J.
EW 012 461

REZEK, JOSEPH W.
EW 012 288

ROBERTS, PHILIP J. W.
EW 012 455

ROUSH, THOMAS H.
EW 012 460

RUCH, WALTER E.
EW 012 379

RUSSO, R. C.
EW 012 063

SAUNDERS, F. M.
EW 012 278

SCARPINO, PASQUALE V.
EW 012 312

SCHAUB, GEORGE
EW 012 397

SCHMIDT, HAROLD E., JR.
EW 012 440

SCHNEITER, R. W.
EW 012 401

SEIDEL, HARRIS F.
EW 012 391

SESSIONS, STUART
EW 012 398

SHORT, JOHN R.
EW 012 290

SICMAN, JOHN C.
EW 012 409

SIMS, RONALD C.
EW 012 464

SMITH, RICHARD C.
EW 012 056

SORRELL, R. KENT
EW 012 395

SOUTHWICK, CHARLES H., ED.
EW 012 269

SPIEGEL, STUART J.
EW 012 307

SPOONER, P.
EW 012 366

STEELMAN, B. L.
EW 012 357

STOVER, ENOS L.
EW 012 447

SULLIVAN, RICHARD H.
EW 012 283

SULLIVAN, ROBERT F.
EW 012 406

TORTORICI, LIBERATO D.
EW 012 304

VAN SWAAY, MAARTEN
EW 012 402

VENOSA, ALBERT D.
EW 012 433

VERDOON, ALBERT J.
EW 011 899

WAITE, THOMAS D.
EW 012 372

WALKER, JOHN
EW 012 412

WALTERS, D. M.
EW 012 353

WEBER, A SCOTT
EW 012 427

WEINBERGER, LEON W.
EW 011 893
EW 011 897

WHITNEY, NELSON S.
EW 012 038

WILCOXON, NATHAN
EW 012 400

WILLEY, B. R.
EW 012 399

YEAMAN, BARBARA
EW 012 412

ZABEL, THOMAS
EW 012 392

ZIRSCHKY, JOHN
EW 012 436

SUBJECT INDEX

*ACCOUNTING	(2)	EW011640	EW012384					
*ACID RAIN	(1)	EW012420						
ACID RAIN	(1)	EW012423						
*ACTIVATED CARBON	(1)	EW012401						
*ACTIVATED SLUDGE	(4)	EW012254	EW012354	EW012355	EW012427			
*ADMINISTRATION	(4)	EW011640	EW011664	EW012378	EW012398			
ADMINISTRATION	(2)	EW011634	EW011635					
ADSORPTION	(1)	EW012426						
*ADVANCED TREATMENT	(1)	EW011645						
*ADVANCED WASTE TREATMENT	(1)	EW011642						
*ADVANCED WASTEWATER TREATMENT	(2)	EW012067	EW012108					
*AERATION SYSTEMS	(1)	EW012285						
*AEROBIC DIGESTION	(1)	EW011887						
*AGRICULTURAL WASTES	(3)	EW012446	EW012442	EW012443				
*AGRICULTURE	(8)	EW011373	EW011890	EW011892	EW011897	EW012273	EW012280	EW012334
	EW012382							
AGRICULTURE	(1)	EW012435						
*AIR	(1)	EW012214						
*AIR POLLUTION	(2)	EW012334	EW012360					
*AIR POLLUTION CONTROL	(2)	EW011848	EW012235					
*ALTERNATIVE TECHNOLOGY	(9)	EW011787	EW011887	EW011888	EW011895	EW011902	EW012062	EW012291
	EW012374	EW012447						
ALTERNATIVE TECHNOLOGY	(2)	EW011650	EW012289					
*ALUMINUM	(1)	EW012278						
*AMMONIA	(3)	EW012108	EW012399	EW012409				
*ANAEROBIC DIGESTION	(1)	EW012430						
*ANALYTICAL TECHNIQUES	(18)	EW012054	EW012348	EW012349	EW012350	EW012351	EW012352	EW012360
	EW012363	EW012364	EW012379	EW012401	EW012421	EW012422	EW012423	EW012424
	EW012433	EW012462	EW012465					
ANALYTICAL TECHNIQUES	(3)	EW012053	EW012208	EW012254				
*ANEROBIC DIGESTION	(1)	EW011887						
*ANIMALS	(1)	EW012465						
ANIMALS	(1)	EW011888						

*ANIMAL WASTES	(1)	EW012356			
*ANNOTATED BIBLIOGRAPHIES	(3)	EW011902	EW012347	EW012379	
*ANNUAL INDEXES	(1)	EW012214			
*AQUACULTURE	(2)	EW011888	EW012438		
*AQUATIC ENVIRONMENTS	(4)	EW012063	EW012455	EW012460	EW012462
*AQUATIC ORGANISMS	(1)	EW012460			
*AQUATIC TOXICOLOGY	(1)	EW012363			
*AQUIRE	(1)	EW012063			
*ASH	(1)	EW012281			
*ASSAYS	(1)	EW012464			
ASSESSMENT	(1)	EW012418			
*AUDIOVISUAL AIDS	(4)	EW012056	EW012058	EW012374	EW012382
AUDITS	(2)	EW012336	EW012384		
*AUTHORING SYSTEMS	(4)	EW012056	EW012057	EW012058	EW012059
*AUTOMATED ANALYSIS	(1)	EW012424			
*AUTOMATED METERS	(2)	EW012415	EW012416		
*BACKFLOW PREVENTION	(1)	EW012137			
*BACTERIA	(4)	EW012277	EW012311	EW012464	EW012465
*BATCH ADSORPTION ISOTHERM TEST	(1)	EW012401			
*BATCH REACTORS	(2)	EW012291	EW012354		
*BAYS	(1)	EW011646			
BENCH SHEETS	(1)	EW012055			
*BIBLIOGRAPHIES	(1)	EW012457			
BIBLIOGRAPHIES	(3)	EW011902	EW012347	EW012379	
*BIDDING	(1)	EW011669			
BIDDING	(1)	EW011990			
*BILLING	(1)	EW012416			
*BILLINGS	(1)	EW012391			
*BIOGRO	(1)	EW011373			
*BIOKINETIC CONSTANTS	(1)	EW012254			

*BIOLOGICAL CONTACTORS	(2)	EW011639	EW012428					
*BIOLOGICAL FIXED-FILM SYSTEMS	(1)	EW012428						
*BIOLOGICAL HAZARDS	(1)	EW012360						
*BIOLOGICAL TREATMENT	(3)	EW012325	EW012443	EW012451				
BIOLOGICAL TREATMENT	(2)	EW012375	EW012445					
*BIOLOGICAL TREATMENT PROCESSES	(1)	EW012301						
*BIOLOGY	(1)	EW012460						
*BIOMONITORING	(1)	EW011636						
*BIRDS	(1)	EW012334						
*BOOKKEEPING	(1)	EW012384						
*BRACKISH WATER	(1)	EW012393						
*BUDGETING	(1)	EW011640						
*BULKING	(1)	EW012355						
CABLE LINES	(1)	EW012415						
*CALIBRATION	(1)	EW011899						
*CALIFORNIA	(1)	EW012304						
*CANADA	(2)	EW012062	EW012199					
*CARVER-GREENFIELD PROCESS	(1)	EW011895						
*CASE HISTORIES	(3)	EW011660	EW011848	EW012359				
*CASE STUDIES	(5)	EW011643	EW011650	EW011659	EW012412	EW012442		
CASE STUDIES	(1)	EW012432						
*CERTIFICATION	(2)	EW012213	EW012326					
*CHANGE PROCESS	(1)	EW012404						
*CHECKLISTS	(1)	EW011994						
*CHEMICAL ANALYSIS	(1)	EW012421						
CHEMICAL ANALYSIS	(1)	EW012422						
*CHEMICAL DISPOSAL	(1)	EW012273						
*CHEMICAL ENGINEERING	(1)	EW012268						
*CHEMICAL INDUSTRY	(2)	EW012254	EW012451					
*CHEMICAL MUTAGENS	(1)	EW012307						
*CHEMICAL REACTIONS	(3)	EW012286	EW012372	EW012459				
*CHEMICALS	(24)	EW012198	EW012203	EW012254	EW012273	EW012286	EW012287	EW012306
	EW012307	EW012340	EW012341	EW012348	EW012349	EW012350	EW012351	EW012352

	EW012357 EW012464	EW012363	EW012372	EW012379	EW012395	EW012421	EW012451	EW012460
CHEMICALS	(3)	EW012368	EW012369	EW012401				
*CHEMICAL TREATMENT	(4)	EW011820	EW012325	EW012426	EW012443			
CHEMICAL TREATMENT	(1)	EW012375						
*CHEMISTRY	(1)	EW012402						
*CHLORAMINES	(1)	EW012312						
*CHLORINATED DIOXINS	(1)	EW012364						
CHLORINATION	(2)	EW012282	EW012409					
*CHLORINE	(2)	EW012108	EW012208					
*CIVIL ENGINEERING	(1)	EW012268						
*CLAIM PREVENTION	(1)	EW012215						
*CLAIM RESOLUTION	(1)	EW012215						
*CLAIMS	(1)	EW012215						
*CLAY SOILS	(1)	EW012339						
*CLEANING	(1)	EW011671						
*CLEAN WATER ACT	(3)	EW012329	EW012330	EW012420				
COAGULATION	(1)	EW012426						
*COAL	(1)	EW012446						
*COAL CLEANING	(1)	EW012446						
*COAL INDUSTRY	(1)	EW012446						
*COAL MINE DRAINAGE	(1)	EW012446						
*COKE PRODUCTION	(1)	EW012449						
*COLIFORMS	(1)	EW012312						
*COLLECTION SYSTEMS	(1)	EW011677						
COLOR	(1)	EW012423						
*COLORADO	(1)	EW012353						
*COMBINED SEWER OVERFLOW	(2)	EW012307	EW012400					
*COMBINED SEWERS	(1)	EW012437						
*COMMERCIAL WATER USE	(1)	EW012435						
*COMMITTEE ON GOVERNMENT OPERATIONS	(2)	EW012198	EW012211					
*COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION	(1)	EW012330						

*COMMITTEE ON SCIENCE AND TECHNOLOGY	(1)	EW012212						
*COMMUNICATIONS	(1)	EW012406						
*COMPLIANCE	(7)	EW011636	EW011646	EW012067	EW012211	EW012330	EW012368	EW012399
COMPLIANCE	(3)	EW012199	EW012369	EW012375				
*COMPOSTING	(4)	EW012284	EW012290	EW012412	EW012438			
*COMPTRAIN	(1)	EW012383						
*COMPUTER APPLICATIONS	(13) EW012260	EW011640 EW012268	EW011995 EW012305	EW012056 EW012353	EW012057 EW012402	EW012058 EW012434	EW012059	EW012060
COMPUTER APPLICATIONS	(1)	EW012415						
*COMPUTER EQUIPMENT	(1)	EW012060						
*COMPUTER INTERFACES	(1)	EW012060						
*COMPUTER LANGUAGES	(1)	EW012060						
*COMPUTERS	(1)	EW012060						
*COMPUTER SOFTWARE	(5)	EW012056	EW012057	EW012058	EW012059	EW012268		
*CONFERENCE MANUALS	(1)	EW011641						
*CONFERENCE PROCEEDINGS	(8) EW012376	EW011643	EW012266	EW012328	EW012339	EW012340	EW012362	EW012375
*CONGRESSIONAL HEARINGS	(5)	EW012198	EW012211	EW012212	EW012329	EW012330		
*CONGRESSIONAL REPORTS	(1)	EW011644						
CONNECTION FEES	(1)	EW012417						
*CONSERVATION	(2)	EW011643	EW012382					
*CONSTRUCTION	(8) EW012425	EW011637	EW011645	EW011646	EW011647	EW011653	EW012200	EW012366
CONSTRUCTION	(3)	EW011641	EW012336	EW012384				
*CONSTRUCTION GRANT PROGRAM	(1)	EW012215						
*CONSTRUCTION GRANTS	(3)	EW011637	EW011653	EW011664				
*CONSTRUCTION GRANTS PROGRAM	(3)	EW011661	EW011990	EW012329				
*CONSTRUCTION GRANTS PROGRAM PLANNING	(1)	EW012336						
*CONSTRUCTION MANAGEMENT	(1)	EW011641						
*CONTAINMENT	(2)	EW012341	EW012369					
*CONTAMINANTS	(1)	EW012394						
*CONTAMINANT TRANSPORT	(1)	EW012260						
*CONTAMINATED WATER	(1)	EW012393						
*CONTAMINATION	(7)	EW012260	EW012266	EW012308	EW012357	EW012373	EW012457	EW012465

CONTAMINATION	(1)	EW012370
*CONTINUOUS MONITORING	(1)	EW012424
*CONTRACTING	(1)	EW011669
*CONTRACTOR CLAIMS	(1)	EW012215
*CONTRACTS	(1)	EW012235
*CONTROLS	(1)	EW012285
CONTROLS	(1)	EW012323
*CONTROL TECHNOLOGY	(1)	EW012323
*CORN	(1)	EW011892
*CORRESPONDENCE COURSES	(1)	EW012213
*COST-BENEFIT ANALYSIS	(1)	EW012419
*COST RECOVERY	(1)	EW011644
*COSTS	(29)	EW011373 EW011642 EW011644 EW011645 EW011646 EW011647 EW011652 EW011660 EW011889 EW011893 EW011895 EW011897 EW012062 EW012067 EW012281 EW012290 EW012291 EW012301 EW012302 EW012328 EW012329 EW012354 EW012366 EW012367 EW012391 EW012392 EW012398 EW012400 EW012415
COSTS	(9)	EW011888 EW011990 EW011994 EW012054 EW012108 EW012282 EW012410 EW012416 EW012419
*CURRICULUM DEVELOPMENT	(6)	EW012056 EW012057 EW012058 EW012059 EW012060 EW012402
*CYANIDE	(1)	EW012450
*DAIRY WASTES	(1)	EW012442
*DATA ANALYSIS	(1)	EW012421
*DATABASES	(3)	EW012063 EW012212 EW012282
*DATA COLLECTION	(1)	EW012055
*DATA REPORTING	(1)	EW012055
*DEC	(1)	EW012059
*DECISION MAKING	(1)	EW012404
*DEPARTMENT OF DEFENSE	(1)	EW012211
*DESIGN	(18)	EW011639 EW011647 EW011653 EW011662 EW011664 EW011820 EW012062 EW012200 EW012285 EW012289 EW012302 EW012367 EW012368 EW012392 EW012400 EW012425 EW012429 EW012432
DESIGN	(8)	EW011888 EW012067 EW012108 EW012323 EW012336 EW012408 EW012427 EW012437
*DESIGN MANUALS	(1)	EW012323

*DESTRATIFICATION	(1)	EW012456						
*DETECTION	(1)	EW012379						
DETERGENTS	(1)	EW012422						
*DEVELOPING COUNTRIES	(1)	EW012195						
*DEVELOPMENT	(1)	EW012231						
*DEWATERING	(2)	EW011689	EW012431					
*DIAGNOSIS	(1)	EW012414						
*DIATOMACEOUS EARTH	(1)	EW012311						
*DIBENZOFURANS	(1)	EW012364						
*DIOXINS	(1)	EW012364						
*DIRECTORIES	(2)	EW012268	EW012273					
DISCHARGE TRENDS	(1)	EW012199						
*DISEASES	(2)	EW012195	EW012356					
*DISINFECTION	(5)	EW011898	EW012288	EW012282	EW012312	EW012433		
*DISPOSAL SITES	(2)	EW012273	EW012370					
*DISSOLVED OXYGEN	(2)	EW012108	EW012456					
*DOMESTIC WATER USE	(1)	EW012435						
*DREDGING	(1)	EW012461						
*DRINKING WATER	(10)	EW011634	EW011635	EW012277	EW012308	EW012311	EW012394	EW012395
	EW012409	EW012410	EW012420					
*DROUGHT	(1)	EW012265						
*DUMPING	(1)	EW012461						
*DYES	(1)	EW012306						
*ECOLOGICAL FACTORS	(1)	EW012463						
*ECOLOGY	(3)	EW012269	EW012458	EW012463				
ECOLOGY	(1)	EW012460						
*ECONOMICS	(8)	EW011889	EW011895	EW011897	EW012280	EW012301	EW012376	EW012419
	EW012443							
*EDUCATIONAL NEEDS	(1)	EW012405						
*EFFLUENTS	(10)	EW011646	EW011650	EW011651	EW011898	EW012287	EW012288	EW012399
	EW012445	EW012447	EW012461					
*ELECTRICAL ENGINEERING	(1)	EW012268						
*ELECTROMAGNETIC FLOWMETERS	(1)	EW011901						
*ELECTROPLATING	(2)	EW012367	EW012450					

*ELIGIBILITY	(1)	EW011664						
*EMERGENCIES	(1)	EW012359						
*EMERGENCY RESPONSES	(1)	EW012373						
*ENERGY	(2)	EW012334	EW012448					
*ENERGY CONSERVATION	(3)	EW011660	EW011887	EW012374				
*ENERGY USE	(1)	EW012291						
ENERGY USE	(1)	EW012282						
*ENFORCEMENT	(2)	EW012330	EW012398					
ENGINEERING	(1)	EW012372						
*ENTEROVIRUSES	(1)	EW012312						
*ENVIRONMENT	(17)	EW012198	EW012211	EW012212	EW012214	EW012269	EW012276	EW012280
	EW012328	EW012334	EW012340	EW012341	EW012356	EW012360	EW012363	EW012364
	EW012372	EW012398						
ENVIRONMENT	(1)	EW012054						
*ENVIRONMENTAL EFFECTS	(6)	EW011890	EW011892	EW011893	EW012203	EW012328	EW012464	
*ENVIRONMENTAL EMERGENCIES	(1)	EW011848						
*ENVIRONMENTAL IMPACTS	(8)	EW011651	EW011897	EW012446	EW012447	EW012449	EW012458	EW012459
	EW012460							
ENVIRONMENTAL IMPACTS	(1)	EW012453						
*ENVIRONMENTAL MONITORING IMPROVEMENT ACT	(1)	EW012212						
*ENVIRONMENTAL PLANNING	(1)	EW012378						
*ENVIRONMENTAL POLICY	(1)	EW012419						
*ENVIRONMENTAL PROBLEMS	(1)	EW012378						
*ENVIRONMENTAL PROTECTION AGENCY	(1)	EW012420						
*EPA	(5)	EW011637	EW011642	EW011644	EW011664	EW011669		
*EQUIPMENT	(20)	EW011639	EW011669	EW011677	EW011787	EW011820	EW011899	EW011900
	EW011901	EW012137	EW012208	EW012267	EW012285	EW012289	EW012291	EW012301
	EW012333	EW012359	EW012367	EW012411	EW012412			
EQUIPMENT	(3)	EW011994	EW012067	EW012323				
*EQUIPMENT NEEDS	(1)	EW012060						
*ESTUARIES	(3)	EW011646	EW012455	EW012461				
*EVALUATION	(9)	EW011634	EW011635	EW011641	EW011662	EW011669	EW011671	EW011848
	EW012244	EW012383						
EVALUATION METHODS	(2)	EW011709	EW011751					

*EXAMINATIONS	(1)	EW012326						
*FACILITATORS	(1)	EW012404						
*FACILITIES	(30)	EW011636	EW011637	EW011641	EW011642	EW011645	EW011650	EW011651
	EW011653	EW011662	EW011664	EW011669	EW011787	EW011900	EW011990	EW012108
	EW012291	EW012301	EW012302	EW012329	EW012336	EW012367	EW012368	EW012400
	EW012410	EW012411	EW012412	EW012425	EW012428	EW012429	EW012432	
FACILITIES	(7)	EW011888	EW011994	EW012067	EW012289	EW012323	EW012408	EW012453
*FACILITY ANALYSIS	(1)	EW012410						
*FACILITY IMPROVEMENTS	(1)	EW011651						
*FEASIBILITY	(1)	EW011893						
*FEDERAL FACILITIES	(1)	EW012211						
*FEDERAL GRANTS	(1)	EW011641						
*FEDERAL PROGRAMS	(2)	EW011644	EW011653					
*FEDERAL ROLE	(3)	EW011642	EW011670	EW012330				
*FEEDS	(5)	EW012348	EW012349	EW012350	EW012351	EW012352		
*FERMENTATION	(1)	EW012441						
*FIELD METHODS	(1)	EW012339						
*FILAMENTOUS ORGANISMS	(1)	EW012355						
*FILMS	(2)	EW012374	EW012382					
*FILTER PRESSES	(1)	EW011889						
*FILTRATION	(3)	EW011820	EW012277	EW012311				
*FINANCES	(1)	EW011652						
*FINANCING	(3)	EW012329	EW012376	EW012417				
*FISH	(3)	EW012334	EW012439	EW012460				
FISH	(1)	EW011888						
*FLAMMABLE LIQUIDS	(1)	EW012360						
*FLOTATION	(1)	EW012392						
*FLOW MEASUREMENT	(4)	EW011636	EW011899	EW011900	EW011901			
*FLOWMETERS	(1)	EW011901						
*FLOW REDUCTION	(1)	EW011643						
*FLOW REGULATORS	(1)	EW011891						
FLUIDIZED-BED COMBUSTION	(1)	EW012448						
*FLUMES	(1)	EW011900						
*FOOD AND DRUG ADMINISTRATION	(5)	EW012348	EW012349	EW012350	EW012351	EW012352		

*FOODS	(5)	EW012348 EW012349 EW012350 EW012351 EW012352
*FOREST PRODUCTS	(1)	EW012445
FOSSIL FUELS	(1)	EW012448
*FRUITS	(1)	EW012440
*FUEL CONSUMPTION	(1)	EW011889
*FUNDING	(2)	EW011637 EW011653
FUNDING	(1)	EW012336
*GASEOUS POLLUTANTS	(1)	EW012379
*GASES	(1)	EW012360
*GAS MEASUREMENT	(1)	EW012456
*GAS TRANSFER	(1)	EW012456
*GIARDIA	(1)	EW012311
*GIARDIASIS	(1)	EW012414
*GOVERNMENT ROLE	(2)	EW012362 EW012378
*GRAINS	(1)	EW012440
*GRANT APPLICATION	(1)	EW011637
*GRANT PROCESSING	(1)	EW012336
*GRANTS	(1)	EW012235
GRANTS	(1)	EW012336
*GRANULAR ACTIVATED CARBON	(1)	EW011820
*GREAT LAKES	(1)	EW012199
*GROUNDWATER	(10)	EW012260 EW012266 EW012276 EW012310 EW012357 EW012373 EW012382 EW012393 EW012453 EW012457
GROUNDWATER	(3)	EW012370 EW012375 EW012435
*GUIDELINES	(3)	EW011671 EW012063 EW012369
*GUIDES	(4)	EW011677 EW012341 EW012373 EW012383
*HANDBOOKS	(4)	EW012203 EW012301 EW012302 EW012336
*HAZARDOUS MATERIALS	(7)	EW012198 EW012306 EW012340 EW012341 EW012359 EW012360 EW012375
*HAZARDOUS SUBSTANCES	(1)	EW012420
*HAZARDOUS WASTES	(6)	EW012211 EW012266 EW012362 EW012368 EW012370 EW012453
*HEALTH	(1)	EW012214
*HEALTH EFFECTS	(2)	EW012438 EW012465
*HEARINGS	(1)	EW011661

*HEAVY METALS	(3)	EW012450	EW012459	EW012462				
*HELICAL BEND FLOW REGULATOR	(1)	EW011891						
*HERBICIDES	(1)	EW012273						
*HIGHER EDUCATION	(1)	EW012402						
HIGHER EDUCATION	(1)	EW012372						
*HOME STUDY	(1)	EW012213						
*HOME TREATMENT METHODS	(1)	EW012395						
*HUMAN RESOURCE DEVELOPMENT	(2)	EW012403	EW012404					
*HUMANS	(1)	EW012464						
HYACINTHS	(1)	EW011888						
*HYDRAULICS	(1)	EW012267						
*HYDROCARBONS	(2)	EW012422	EW012459					
*HYDROGEN SULFIDE	(1)	EW012200						
*HYDROLOGY	(2)	EW012373	EW012437					
*HYGIENE	(1)	EW012195						
*IBM PC	(1)	EW012037						
*ILLINOIS	(1)	EW012400						
*IMPACT ANALYSES	(1)	EW012378						
*INCINERATION	(2)	EW012368	EW012374					
*INCINERATORS	(1)	EW011889						
*INDUSTRIAL COST RECOVERY	(1)	EW011644						
*INDUSTRIAL WASTES	(19)	EW012278	EW012306	EW012362	EW012375	EW012439	EW012440	EW012441
	EW012442	EW012443	EW012444	EW012445	EW012446	EW012447	EW012448	EW012449
	EW012450	EW012451	EW012452	EW012453				
INDUSTRIAL WASTES	(2)	EW012427	EW012460					
*INDUSTRY	(8)	EW011644	EW012276	EW012278	EW012306	EW012328	EW012362	EW012367
	EW012435							
INDUSTRY	(1)	EW012254						
*INFILTRATION	(5)	EW011645	EW011671	EW012283	EW012353	EW012358		
*INFLOW	(3)	EW011645	EW011671	EW012283				
*INFORMATION RETRIEVAL	(1)	EW012063						
*INNOVATIONS	(1)	EW011787						
*INNOVATIVE TECHNOLOGY	(1)	EW011660						
*INORGANIC COMPOUNDS	(2)	EW012421	EW012433					

*INORGANIC CONTAMINANTS	(1)	EW012394						
*INSIGHT	(1)	EW012058						
*INSPECTION	(4)	EW011634	EW011635	EW011636	EW011671			
INSPECTION	(1)	EW012369						
*INSTRUCTION	(2)	EW012402	EW012403					
*INSTRUCTIONAL DEVELOPMENT	(2)	EW011709	EW011751					
*INSTRUCTIONAL MATERIALS	(19) EW012058 EW012374	EW011634 EW012059 EW012382	EW011635 EW012195 EW012383	EW011650 EW012325 EW012403	EW011709 EW012326	EW011751 EW012338	EW012056 EW012363	EW012057 EW012372
*INSTRUMENTATION	(5)	EW011900	EW011901	EW012402	EW012424	EW012434		
INSTRUMENTATION	(1)	EW012427						
*INSTRUMENTS	(1)	EW011899						
*INTERNAL CONTROL	(1)	EW011990						
*INVERTEBRATES	(1)	EW012460						
ION EXCHANGE	(1)	EW012426						
*IRRIGATION	(1)	EW012280						
IRRIGATION	(1)	EW012435						
*ISSUES	(2)	EW011643	EW012328					
*IVIS	(1)	EW012059						
*LABORATORY MANUALS	(5)	EW012348	EW012349	EW012350	EW012351	EW012352		
*LABORATORY METHODS	(1)	EW012339						
*LABORATORY PROCEDURES	(10) EW012401	EW012348 EW012402	EW012349 EW012421	EW012350	EW012351	EW012352	EW012360	EW012379
*LABORATORY QUALITY ASSURANCE	(1)	EW011636						
*LAGOON LININGS	(1)	EW011647						
*LAGOONS	(3)	EW011647	EW012399	EW012429				
*LAKES	(1)	EW012455						
*LAND	(1)	EW011848						
*LAND APPLICATION	(10) EW012286	EW011373 EW012436	EW011659 EW012438	EW011662	EW011890	EW011892	EW011897	EW012054
*LAND DEVELOPMENT	(1)	EW011893						
*LANDFILLS	(2)	EW012347	EW012374					
*LAND TREATMENT	(1)	EW012353						
*LAND USE	(3)	EW011897	EW012334	EW012374				

LAND USE	(1)	EW011868						
*LANNING	(1)	EW012359						
*LEACHATE	(1)	EW012347						
*LEACHATE TREATMENT	(1)	EW012347						
*LEAK DETECTION	(1)	EW012267						
*LEAKS	(1)	EW012267						
*LEARNING	(1)	EW012405						
*LEGAL ASPECTS	(1)	EW012420						
*LEGISLATION	(3)	EW011670	EW012362	EW012420				
LESSON PLANS	(2)	EW011709	EW011751					
*LIME HANDLING SYSTEMS	(1)	EW011820						
*LIQUID WASTES	(1)	EW012290						
*LITERATURE REVIEWS	(50)	EW011647	EW012289	EW012310	EW012357	EW012370	EW012418	EW012419
	EW012420	EW012421	EW012422	EW012423	EW012425	EW012426	EW012428	EW012429
	EW012430	EW012431	EW012432	EW012433	EW012434	EW012435	EW012436	EW012437
	EW012438	EW012439	EW012440	EW012441	EW012442	EW012443	EW012444	EW012445
	EW012446	EW012447	EW012448	EW012450	EW012451	EW012452	EW012453	EW012454
	EW012455	EW012456	EW012457	EW012458	EW012459	EW012460	EW012461	EW012462
	EW012463	EW012464	EW012465					
LITERATURE REVIEWS	(1)	EW012427						
*MAINE	(1)	EW012412						
*MAINTENANCE	(18)	EW011662	EW011990	EW011994	EW011995	EW012137	EW012208	EW012283
	EW012285	EW012288	EW012289	EW012302	EW012333	EW012383	EW012391	EW012407
	EW012408	EW012425	EW012434					
MAINTENANCE	(2)	EW012067	EW012369					
*MANAGEMENT	(35)	EW011373	EW011640	EW011641	EW011643	EW011646	EW011659	EW011990
	EW011994	EW011995	EW012054	EW012055	EW012062	EW012215	EW012244	EW012265
	EW012305	EW012328	EW012329	EW012360	EW012362	EW012376	EW012378	EW012383
	EW012384	EW012399	EW012405	EW012408	EW012419	EW012432	EW012437	EW012442
	EW012443	EW012445	EW012454	EW012457				
MANAGEMENT	(4)	EW011634	EW011635	EW012336	EW012368			
*MANUALS	(10)	EW011634	EW011635	EW012063	EW012200	EW012305	EW012348	EW012349
	EW012350	EW012351	EW012352					
MANUALS	(1)	EW012323						
*MANUFACTURERS	(1)	EW011995						
*MARINE ENVIRONMENT	(1)	EW011646						
*MARINE ENVIRONMENTS	(1)	EW012461						
*MATHEMATICS	(1)	EW012268						
*MEASUREMENT	(4)	EW011900	EW011901	EW012208	EW012267			

*MEAT .	(1)	EW012439						
*MEETING ANNOUNCEMENTS	(1)	EW011661						
MEMBRANE PROCESSES	(1)	EW012426						
*METAL INDUSTRY	(1)	EW012278						
*METALS	(3)	EW012278	EW012286	EW012421				
METALS	(1)	EW012375						
METHODOLOGY	(1)	EW012244						
*METROCRO	(1)	EW011373						
*MICROBIOLOGY	(4)	EW012372	EW012433	EW012461	EW012465			
MICROBIOLOGY	(1)	EW012430						
*MICROFAUNA	(1)	EW012463						
*MINING	(2)	EW011893	EW012446					
*MODELING	(4)	EW012434	EW012454	EW012456	EW012462			
MODELING	(2)	EW012418	EW012427					
*MODELS	(5)	EW011651	EW012244	EW012303	EW012339	EW012399		
MODELS	(1)	EW012429						
*MONITORING	(18)	EW011899	EW012208	EW012211	EW012212	EW012231	EW012276	EW012330
	EW012360	EW012366	EW012370	EW012373	EW012379	EW012418	EW012424	EW012452
	EW012454	EW012456	EW012457					
MONITORING	(2)	EW012199	EW012453					
*MULTIPLE-HEARTH INCINERATORS	(1)	EW011889						
*MUNICIPAL GRANTS	(1)	EW012215						
MUNICIPALITIES	(1)	EW012336						
*NATIONAL MARINE POLLUTION PLANNING ACT	(1)	EW012231						
*NATIONAL PARKS	(1)	EW012290						
*NATURAL RESOURCES	(2)	EW012334	EW012382					
*NATURAL SYSTEMS	(1)	EW011848						
*NEEDS	(1)	EW011642						
*NEEDS ASSESSMENT	(2)	EW011645	EW011646					
*NETWORKS	(1)	EW012244						
NEVADA	(1)	EW012244						
*NITROGEN	(4)	EW011651	EW012323	EW012353	EW012358			

NITROGEN	(1)	EW012427						
*NITROGEN REMOVAL	(1)	EW012333						
*NOISE	(2)	EW011848	EW012214					
NONPOINT POLLUTION	(1)	EW012420						
*NONPOINT SOURCE POLLUTION	(1)	EW012454						
*NOVA SCOTIA	(1)	EW012062						
*NPDES	(1)	EW011636						
*NTIS	(1)	EW012214						
*NUCLEAR POWER	(2)	EW012448	EW012452					
*NUTRIENTS	(1)	EW012462						
*OCCUPATIONAL HAZARDS	(1)	EW012360						
*OCEANOGRAPHY	(2)	EW012198	EW012231					
*OCEAN POLLUTION	(1)	EW012231						
*OCEANS	(1)	EW012461						
ODOR	(1)	EW012423						
*OHIO	(1)	EW012418						
OHIO	(1)	EW012308						
*OIL DRILLING	(1)	EW012461						
*OIL SHALE	(1)	EW012276						
*OIL SPILLS	(1)	EW012461						
OIL SPILLS	(1)	EW012199						
*ONSITE DISPOSAL	(2)	EW011902	EW012432					
*ONSITE TREATMENT	(1)	EW012432						
*ONSITE WASTEWATER SYSTEMS	(1)	EW011650						
*ONSITE WASTEWATER TREATMENT	(2)	EW012288	EW012310					
OPERATIONS	(1)	EW012368						
*OPERATIONS (WASTEWATER)	(64)	EW011373	EW011636	EW011639	EW011640	EW011642	EW011650	EW011653
	EW011660	EW011662	EW011787	EW011820	EW011887	EW011888	EW011889	EW011891
	EW011898	EW011899	EW011901	EW011990	EW012055	EW012062	EW012067	EW012108
	EW012200	EW012208	EW012278	EW012281	EW012283	EW012285	EW012287	EW012288
	EW012289	EW012291	EW012301	EW012302	EW012304	EW012323	EW012325	EW012326
	EW012333	EW012338	EW012347	EW012353	EW012354	EW012355	EW012358	EW012367
	EW012383	EW012384	EW012399	EW012400	EW012408	EW012411	EW012412	EW012418
	EW012420	EW012426	EW012427	EW012428	EW012430	EW012433	EW012434	EW012436
	EW012445							
OPERATIONS (WASTEWATER)	(2)	EW012401	EW012429					

*OPERATIONS (WATER)	(15)	EW011634 EW011635 EW012213 EW012277 EW012311 EW012383 EW012384 EW012391 EW012392 EW012394 EW012407 EW012409 EW012415 EW012418 EW012433
OPERATIONS (WATER)	(1)	EW012416
*OPERATORS	(1)	EW012326
*OPERATOR TRAINING	(3)	EW011670 EW012213 EW012383
OREGON	(1)	EW011373
*ORGANIC CHEMICALS	(3)	EW012287 EW012308 EW012395
ORGANIC CHEMICALS	(1)	EW012401
*ORGANIC COMPOUNDS	(6)	EW012340 EW012357 EW012422 EW012433 EW012459 EW012462
*ORGANIZATIONAL STRUCTURE	(1)	EW012405
*ORGANIZATIONS	(1)	EW012405
*OXIDATION DITCHES	(1)	EW012333
*OXIDATION PONDS	(1)	EW012429
OXIDATIVE PROCESSES	(1)	EW012426
*OXYGEN	(2)	EW011651 EW011887
OXYGEN UPTAKE	(1)	EW012427
OZONATION	(1)	EW012282
*PACKAGE TREATMENT PLANTS	(1)	EW012411
*PALMER-BOWLUS FLUMES	(1)	EW011900
*PAPER INDUSTRY	(1)	EW012445
*PARKS	(1)	EW012290
*PARSHALL FLUMES	(1)	EW011900
*PATHOGENS	(2)	EW011887 EW012465
*PERFORMANCE EVALUATION	(39)	EW011373 EW011639 EW011647 EW011651 EW011820 EW011888 EW011889 EW011891 EW011893 EW011895 EW011897 EW011898 EW011899 EW011901 EW012054 EW012067 EW012108 EW012277 EW012278 EW012283 EW012284 EW012288 EW012289 EW012290 EW012291 EW012301 EW012302 EW012304 EW012311 EW012312 EW012333 EW012354 EW012355 EW012358 EW012392 EW012395 EW012411 EW012412 EW012429
PERFORMANCE EVALUATION	(2)	EW012370 EW012430
*PERFORMANCE IMPROVEMENT	(2)	EW012301 EW012302
*PERMITS	(1)	EW012398
*PESTICIDES	(11)	EW012203 EW012214 EW012273 EW012348 EW012349 EW012350 EW012351 EW012352 EW012422 EW012459 EW012461
*PETROLEUM	(1)	EW012447

*PETROLEUM INDUSTRY	(1)	EW012199						
*PHOTOGRAPHIC TECHNIQUES	(2)	EW012396	EW012397					
*PHOTOGRAPHY	(2)	EW012396	EW012397					
*PHYSICAL TREATMENT	(3)	EW011820	EW012325	EW012426				
PHYSICAL TREATMENT	(1)	EW012375						
*PICTURE QUALITY	(2)	EW012396	EW012397					
*PIGMENTS	(1)	EW012306						
*PILOT STUDIES	(1)	EW012394						
*PLANNING	(20) EW012062 EW012405	EW011637 EW012212 EW012406	EW011640 EW012265 EW012407	EW011645 EW012305 EW012408	EW011646 EW012328 EW012410	EW011662 EW012376	EW011848 EW012378	EW011995 EW012403
PLANNING	(5)	EW011634	EW011635	EW011994	EW012368	EW012372		
*PLANTS	(1)	EW012460						
PLANTS	(1)	EW011888						
*PLASTIC INDUSTRY	(1)	EW012254						
*POLICIES	(8) EW012419	EW011664	EW011669	EW012211	EW012212	EW012280	EW012328	EW012378
POLICIES	(1)	EW012308						
*POLICY DEVELOPMENT	(1)	EW012212						
*POLLUTANTS	(1)	EW012379						
*POLLUTION	(5)	EW012203	EW012269	EW012382	EW012459	EW012464		
*POLLUTION CONTROL	(18) EW012366 EW012454	EW011848 EW012373 EW012455	EW012198 EW012379 EW012461	EW012199 EW012420	EW012214 EW012446	EW012276 EW012449	EW012306 EW012450	EW012328 EW012451
*POSTSECONDARY EDUCATION	(9) EW012402	EW011650 EW012403	EW011709	EW012213	EW012325	EW012326	EW012338	EW012363
POSTSECONDARY EDUCATION	(1)	EW011751						
*POULTRY	(1)	EW012439						
*POWER INDUSTRY	(1)	EW012448						
*POWER PRODUCTION	(1)	EW012448						
*PRELIMINARY STUDIES	(1)	EW012305						
*PRELIMINARY TREATMENT	(1)	EW012338						
*PRESSURE SEWERS	(2)	EW011902	EW012288					
*PRINTING	(1)	EW012396						
PRIORITY POLLUTANTS	(1)	EW012254						

*PROBLEMS	(1)	EW012283						
*PROCEDURES	(1)	EW012336						
PROCESS CONTROL	(1)	EW012427						
*PROCESS DESCRIPTIONS	(1)	EW011639						
PROCESS DESCRIPTIONS	(1)	EW012430						
*PROCESSING SYSTEMS	(1)	EW011677						
*PRODUCTIVITY	(1)	EW011993						
PRODUCTIVITY	(1)	EW011994						
*PROGRAM DESCRIPTIONS	(1)	EW012213						
*PROGRAM DEVELOPMENT	(1)	EW012406						
*PROGRAM EVALUATION	(2)	EW011644	EW011669					
*PROJECT MANAGEMENT	(1)	EW011641						
*PUBLIC HEALTH	(14) EW012352	EW011890 EW012356	EW012195 EW012364	EW012308 EW012374	EW012348 EW012414	EW012349 EW012438	EW012350 EW012464	EW012351
PUBLIC HEALTH	(3)	EW011634	EW011635	EW012372				
*PUBLICITY	(1)	EW011661						
*PUBLIC NOTICES	(1)	EW011661						
*PUBLIC PARTICIPATION	(2)	EW011643	EW011661					
*PUBLIC POLICY	(1)	EW012419						
*PULP INDUSTRY	(1)	EW012445						
*PURCHASING	(1)	EW011669						
QSAR	(1)	EW012340						
*RADIATION	(1)	EW012214						
*RADIOACTIVE MATERIALS	(1)	EW012452						
*RADIOACTIVE WASTES	(1)	EW012452						
RADIOACTIVITY	(1)	EW012423						
*RATE EQUALIZATION	(1)	EW012417						
*RATES	(1)	EW011652						
*REAERATION	(1)	EW012456						
*RECHARGE WELLS	(1)	EW012393						
*RECLAMATION	(1)	EW011893						
*RECOMMENDATIONS	(18) EW011890 EW012328	EW011644 EW011892 EW012396	EW011647 EW011901 EW012397	EW011653 EW011990	EW011659 EW012276	EW011661 EW012278	EW011820 EW012310	EW011888 EW012312

*RECORDKEEPING	(5)	EW011636	EW011652	EW012055	EW012360	EW012384		
*RECORDS	(1)	EW012384						
*RECYCLING	(6)	EW011373	EW011660	EW012362	EW012374	EW012435	EW012438	
RECYCLING	(1)	EW012375						
*REDUCED PRESSURE DEVICES	(1)	EW012137						
*REFERENCE MANUALS	(1)	EW011671						
*REFERENCE MATERIALS	(3)	EW012340	EW012341	EW012359				
REFERENCE MATERIALS	(1)	EW012367						
*REGULATIONS	(16)	EW011640	EW011643	EW011652	EW011653	EW011664	EW011669	EW011671
	EW012266	EW012328	EW012330	EW012334	EW012398	EW012399	EW012442	EW012446
	EW012450							
REGULATIONS	(3)	EW012199	EW012375	EW012448				
*REHABILITATION	(3)	EW011645	EW012283	EW012425				
*REMOTE READING	(2)	EW012415	EW012416					
*RENOVATION	(1)	EW012418						
*REPORTS	(3)	EW011641	EW011848	EW012276				
REPORTS	(1)	EW012199						
*RESEARCH	(7)	EW011888	EW012231	EW012235	EW012428	EW012458	EW012459	EW012464
RESEARCH	(1)	EW012460						
*RESEARCH NEEDS	(1)	EW012340						
*RESEARCH REPORTS	(52)	EW011890	EW011891	EW011892	EW011893	EW011897	EW011898	EW012203
	EW012260	EW012277	EW012278	EW012286	EW012304	EW012307	EW012311	EW012312
	EW012333	EW012422	EW012423	EW012425	EW012426	EW012427	EW012429	EW012430
	EW012431	EW012432	EW012433	EW012434	EW012435	EW012436	EW012437	EW012438
	EW012440	EW012441	EW012442	EW012443	EW012444	EW012445	EW012446	EW012447
	EW012448	EW012449	EW012450	EW012451	EW012452	EW012453	EW012455	EW012456
	EW012457	EW012461	EW012462	EW012463	EW012465			
*RESEARCH REVIEWS	(6)	EW012357	EW012454	EW012458	EW012459	EW012460	EW012464	
*RESERVOIRS	(1)	EW012456						
*RESIDUAL CHLORINE	(1)	EW012208						
*RESOURCE RECOVERY	(2)	EW011677	EW012374					
RESOURCE RECOVERY	(1)	EW012375						
*RESPONSE STRATEGIES	(2)	EW012341	EW012359					
*REVENUE GENERATION	(1)	EW011640						
*RISK ASSESSMENT	(2)	EW011890	EW012282					
RISK ASSESSMENT	(1)	EW012452						

*RIVERS	(2)	EW011651	EW012455					
*ROTATING BIOLOGICAL CONTACTORS	(3)	EW011639	EW012289	EW012428				
*RURAL AREAS	(7)	EW011634	EW011635	EW011902	EW012062	EW012277	EW012383	EW012384
*RUTGERS STRATEGY	(1)	EW012284						
*SAFETY	(4)	EW012214	EW012273	EW012360	EW012425			
SAFETY	(2)	EW012282	EW012369					
*SAMPLING	(8)	EW011636	EW012364	EW012379	EW012421	EW012424	EW012457	EW012462
	EW012464							
*SANITATION	(2)	EW012195	EW012432					
*SCIENCES	(1)	EW012269						
*SCRIPTCODER	(1)	EW012056						
*SECONDARY TREATMENT	(1)	EW011645						
*SECONDERAY TREATMENT	(1)	EW011642						
*SEDIMENTATION	(1)	EW012392						
*SEDIMENTS	(1)	EW012462						
*SEPTIC TANKS	(5)	EW011902	EW012287	EW012288	EW012310	EW012432		
*SEQUENCING BATCH REACTORS	(1)	EW012291						
*SERVICES	(1)	EW012417						
*SEWAGE	(2)	EW011646	EW012356					
*SEWAGE SLUDGE	(6)	EW011659	EW011890	EW011892	EW011893	EW011897	EW012286	
*SEWER OVERFLOWS	(2)	EW012307	EW012400					
*SEWERS	(9)	EW011642	EW011643	EW011646	EW011671	EW012200	EW012283	EW012307
	EW012425	EW012437						
*SIMULATIONS	(3)	EW012305	EW012308	EW012339				
*SITE EVALUATION	(1)	EW012370						
SITE SELECTION	(2)	EW012370	EW012375					
	(1)	EW012362						
SKILL DEVELOPMENT	(2)	EW011709	EW011751					
*SLUDGE	(21)	EW011373	EW011659	EW011787	EW011887	EW011889	EW011890	EW011892
	EW011895	EW011897	EW012054	EW012278	EW012281	EW012284	EW012286	EW012304
	EW012355	EW012368	EW012412	EW012431	EW012438	EW012450		
SLUDGE	(1)	EW012375						
*SLUDGE COMPOSTING	(2)	EW012290	EW012412					

*SLUDGE DEWATERING	(1)	EW011895				
*SLUDGE DRYING	(1)	EW011895				
*SLUDGE STABILIZATION	(1)	EW012431				
*SLUDGE TREATMENT	(1)	EW012431				
*SLUDGE UTILIZATION	(1)	EW012431				
*SLURRY TRENCHES	(1)	EW012366				
*SLURRY WALLS	(1)	EW012366				
*SMALL SYSTEMS	(1)	EW011902				
*SOIL	(2)	EW011659	EW012054			
*SOIL MECHANICS	(1)	EW012339				
*SOILS	(3)	EW012286	EW012339	EW012432		
SOLIDS SEPARATION	(1)	EW012426				
SOLID WASTE DISPOSAL	(1)	EW012199				
*SOLID WASTES	(5)	EW011677	EW012214	EW012368	EW012374	EW012433
*SOLUTE MOVEMENT	(1)	EW012339				
*SOURCE SEPARATION	(1)	EW011677				
*SPILLS	(1)	EW012341				
STAFF DEVELOPMENT	(1)	EW011731				
STAFFING	(1)	EW011994				
STANDARDS	(1)	EW012369				
*STATE-OF-THE-ART REVIEWS	(1)	EW012418				
STATE PRIORITIES	(1)	EW011990				
*STATE ROLE	(3)	EW011670	EW012330	EW012376		
*STEEL INDUSTRY	(1)	EW012449				
*STORAGE	(1)	EW012432				
STORAGE	(3)	EW011634	EW011635	EW012446		
*STORAGE TANKS	(1)	EW012369				
*STORM DRAINAGE	(1)	EW012408				
*STORMWATER	(4)	EW011891	EW012305	EW012307	EW012437	
*STORYBOARDING	(1)	EW012057				
*STREAMS	(1)	EW012456				
*STRIP MINING	(2)	EW011892	EW011893			

*STUDY MANUALS	(1)	EW012326
*SURFACE DISCHARGES	(1)	EW011660
*SURFACE RUNOFF	(4)	EW011891 EW012305 EW012307 EW012437
*SURVEYS	(10)	EW011642 EW011645 EW011646 EW011647 EW011671 EW012067 EW012289 EW012391 EW012394 EW012411
*SWIRL CONCENTRATIONS	(1)	EW012400
*SWIRL REGULATORS	(1)	EW011891
*SYNTHETIC FUELS	(1)	EW012447
*SYSTEM DEVELOPMENT	(1)	EW012417
*SYSTEMS ANALYSIS	(2)	EW012308 EW012418
*SYSTEMS APPROACH	(1)	EW012403
*TASK ANALYSIS	(1)	EW012406
TASK ANALYSIS	(2)	EW011709 EW011751
*TEACHER EDUCATION	(2)	EW011709 EW011751
*TEACHING GUIDES	(2)	EW011635 EW011751
*TEACHING SKILLS	(2)	EW011709 EW011751
*TECHNOLOGICAL ADVANCEMENTS	(1)	EW012434
*TECHNOLOGY	(24)	EW011660 EW011662 EW011787 EW011887 EW011888 EW011895 EW011897 EW012062 EW012067 EW012198 EW012266 EW012278 EW012285 EW012291 EW012323 EW012353 EW012354 EW012367 EW012376 EW012404 EW012416 EW012426 EW012432 EW012449
TECHNOLOGY	(4)	EW012287 EW012372 EW012415 EW012435
*TESTING	(1)	EW012464
*TEXTILES	(1)	EW012444
*THERMAL CONDITIONING	(1)	EW012304
*THERMAL POLLUTION	(1)	EW012438
*TOXIC CHEMICALS	(1)	EW012287
*TOXICOLOGY	(2)	EW012340 EW012363
*TOXIC SUBSTANCES	(13)	EW012063 EW012283 EW012308 EW012341 EW012348 EW012349 EW012350 EW012351 EW012352 EW012363 EW012364 EW012369 EW012375
*TRACE METALS	(2)	EW012286 EW012421
*TRAINING	(11)	EW011634 EW011635 EW011670 EW012213 EW012325 EW012359 EW012383 EW012403 EW012404 EW012405 EW012406
TRAINING	(3)	EW011709 EW011751 EW012412

*TRAINING [illegible]	(2)	EW011709 EW011751
*TRAINING NEEDS	(1)	EW012405
*TRANSMISSION	(1)	EW012414
TRANSPORTATION	(3)	EW012282 EW012446 EW012452
*TREATMENT	(1)	EW012414
*TRENDS	(9)	EW011651 EW012199 EW012269 EW012280 EW012328 EW012334 EW012391 EW012405 EW012407
*TRICKLING FILTERS	(1)	EW012428
*TRIHALOMETHANES	(1)	EW012409
*TROUBLESHOOTING	(1)	EW012137
*TURBIDITY	(2)	EW012277 EW012311
*ULTRAVIOLET RADIATION	(1)	EW011898
ULTRAVIOLET RADIATION	(1)	EW012282
*UNESCO	(1)	EW012328
*UNITED STATES	(2)	EW012199 EW012280
*UNIT PROCESSES	(2)	EW011020 EW012325
*URBAN AREAS	(2)	EW012305 EW012437
*URBAN RUNOFF	(1)	EW011891
*USEPA	(17)	EW011637 EW011641 EW011644 EW011653 EW011661 EW011664 EW011669 EW011670 EW011990 EW012198 EW012211 EW012212 EW012215 EW012235 EW012280 EW012329 EW012330
*USER CHARGES	(1)	EW011652
*USER CHARGES SYSTEMS	(1)	EW011652
*UTILITIES	(3)	EW012268 EW012384 EW012391
*VACUUM SEWERS	(1)	EW011902
*VADOSE ZONES	(1)	EW012370
VALUE ENGINEERING	(1)	EW011990
*VEGETABLES	(1)	EW012440
*VENTURI NOZZLES	(1)	EW011899
*VENTURI TUBES	(1)	EW011899
*VERTEBRATES	(1)	EW012460
*VIDEODISCS	(5)	EW012056 EW012057 EW012[illegible] EW012059 EW012060
*VIRUSES	(2)	EW012312 EW012465
*VOLATILE ORGANIC CHEMICALS	(2)	EW012395 EW012401

*WASTE	(1)	EW012445
*WASTE DISPOSAL	(41)	EW011373 EW011639 EW011677 EW011889 EW011890 EW011893 EW011895 EW011897 EW012054 EW012195 EW012198 EW012211 EW012266 EW012273 EW012281 EW012284 EW012286 EW012290 EW012341 EW012347 EW012362 EW012366 EW012374 EW012412 EW012431 EW012438 EW012439 EW012440 EW012441 EW012442 EW012443 EW012445 EW012446 EW012447 EW012449 EW012450 EW012451 EW012452 EW012453 EW012457 EW012461
WASTE DISPOSAL	(2)	EW012370 EW012375
*WASTE MANAGEMENT	(3)	EW012334 EW012452 EW012453
*WASTE RECOVERY	(1)	EW012441
*WASTE TREATMENT	(6)	EW012195 EW012341 EW012362 EW012443 EW012448 EW012453
*WASTEWATER	(5)	EW012214 EW012254 EW012422 EW012424 EW012456
*WASTEWATER COLLECTION	(16)	EW011637 EW011642 EW011643 EW011645 EW011646 EW011671 EW011891 EW011902 EW012200 EW012283 EW012305 EW012307 EW012400 EW012408 EW012425 EW012437
*WASTEWATER RECOVERY	(1)	EW012441
*WASTEWATER RECYCLING	(1)	EW012441
*WASTEWATER REUSE	(1)	EW012441
*WASTEWATER STABILIZATION	(1)	EW011647
*WASTEWATER TREATMENT	(107)	EW011373 EW011636 EW011637 EW011639 EW011640 EW011641 EW011642 EW011643 EW011644 EW011645 EW011646 EW011647 EW011650 EW011651 EW011652 EW011653 EW011660 EW011661 EW011662 EW011664 EW011669 EW011670 EW011731 EW011787 EW011820 EW011887 EW011888 EW011889 EW011891 EW011895 EW011898 EW011899 EW011900 EW011901 EW011902 EW011990 EW012054 EW012055 EW012062 EW012067 EW012108 EW012200 EW012208 EW012254 EW012278 EW012281 EW012282 EW012283 EW012284 EW012285 EW012286 EW012287 EW012288 EW012289 EW012290 EW012291 EW012301 EW012302 EW012304 EW012306 EW012310 EW012312 EW012323 EW012325 EW012326 EW012329 EW012333 EW012336 EW012338 EW012347 EW012353 EW012354 EW012355 EW012358 EW012367 EW012383 EW012399 EW012400 EW012401 EW012411 EW012412 EW012419 EW012420 EW012426 EW012427 EW012428 EW012429 EW012430 EW012431 EW012432 EW012433 EW012434 EW012435 EW012436 EW012438 EW012439 EW012440 EW012441 EW012442 EW012443 EW012444 EW012446 EW012447 EW012448 EW012449 EW012450 EW012451
WASTEWATER TREATMENT	(4)	EW011709 EW012384 EW012418 EW012437
*WATER	(4)	EW012195 EW012214 EW012356 EW012422
*WATER AUDITS	(1)	EW012267
*WATER CHARACTERISTICS	(1)	EW012423
*WATER CONSERVATION	(1)	EW011643
*WATER DEMAND	(1)	EW012265
*WATER DISPOSAL	(1)	EW012306
*WATER DISTRIBUTION	(5)	EW012137 EW012391 EW012413 EW012416 EW012417

WATER DISTRIBUTION	(1)	EW012384						
*WATER EMERGENCIES	(1)	EW012265						
*WATER INNOVATIONS PROJECT	(1)	EW012398						
*WATER LOSS	(1)	EW012267						
*WATER METERS	(2)	EW012415	EW012416					
*WATER MOVEMENT	(1)	EW012339						
*WATER POLLUTION	(8)	EW012334	EW012454	EW012455	EW012460	EW012461	EW012462	EW012463
	EW012465							
*WATER POLLUTION CONTROL	(15)	EW011848	EW012198	EW012199	EW012235	EW012266	EW012276	EW012308
	EW012310	EW012330	EW012366	EW012367	EW012372	EW012373	EW012382	EW012458
*WATER QUALITY	(41)	EW011634	EW011635	EW011636	EW011642	EW011651	EW011670	EW012108
	EW012266	EW012308	EW012310	EW012330	EW012347	EW012357	EW012370	EW012372
	EW012373	EW012382	EW012398	EW012399	EW012407	EW012418	EW012419	EW012420
	EW012421	EW012422	EW012423	EW012424	EW012433	EW012435	EW012437	EW012453
	EW012454	EW012455	EW012456	EW012457	EW012458	EW012460	EW012461	EW012462
	EW012463	EW012465						
WATER QUALITY	(3)	EW012067	EW012336	EW012367				
*WATER RATES	(2)	EW012391	EW012417					
WATER RATES	(2)	EW012384	EW012410					
*WATER RECLAMATION	(1)	EW012435						
*WATER RESOURCES	(13)	EW011643	EW012244	EW012265	EW012266	EW012280	EW012357	EW012372
	EW012376	EW012382	EW012418	EW012419	EW012435	EW012457		
WATER RESOURCES	(1)	EW012370						
*WATER REUSE	(2)	EW012244	EW012435					
*WATER SUPPLY	(11)	EW012137	EW012195	EW012244	EW012265	EW012267	EW012280	EW012393
	EW012394	EW012415	EW012416	EW012417				
*WATER SYSTEMS	(2)	EW011634	EW011635					
*WATER TREATMENT	(19)	EW011634	EW011635	EW012195	EW012213	EW012266	EW012277	EW012311
	EW012312	EW012383	EW012391	EW012392	EW012394	EW012395	EW012407	EW012409
	EW012410	EW012420	EW012433	EW012435				
WATER TREATMENT	(1)	EW012384						
*WATER WELLS	(1)	EW012265						
*WELLS	(2)	EW012265	EW012393					
*WEST VIRGINIA	(1)	EW012329						
WEST VIRGINIA	(1)	EW012308						
*WILDLIFE	(2)	EW012203	EW012334					
WISCONSIN	(1)	EW011373						
*WORKSHOPS	(2)	EW012285	EW012355					

*WORLD PROBLEMS	(3)	EW012269	EW012328	EW012370
*WRITING	(1)	EW011661		
*WYOMING	(1)	EW012399		